



Appl. No. 09/742,366; Filed: December 22, 2000
Dkt. No. 1875.0200000; Group Art Unit: 2811
Inventor(s): Khan et al.; Tel: 202/371-2600
Title: Enhanced Die-Up Ball Grid Array and Method for Making the Same

1/21

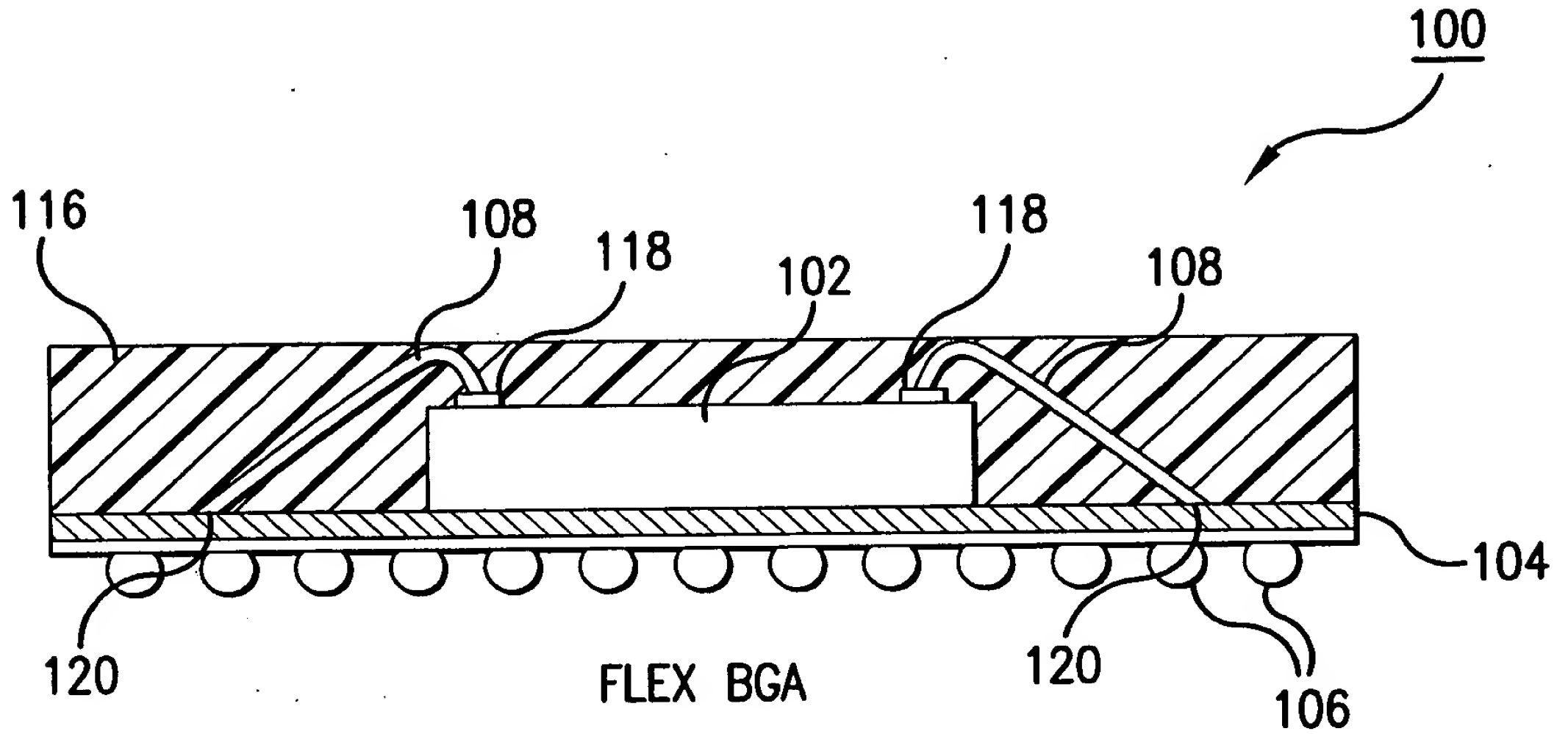


FIG.1A

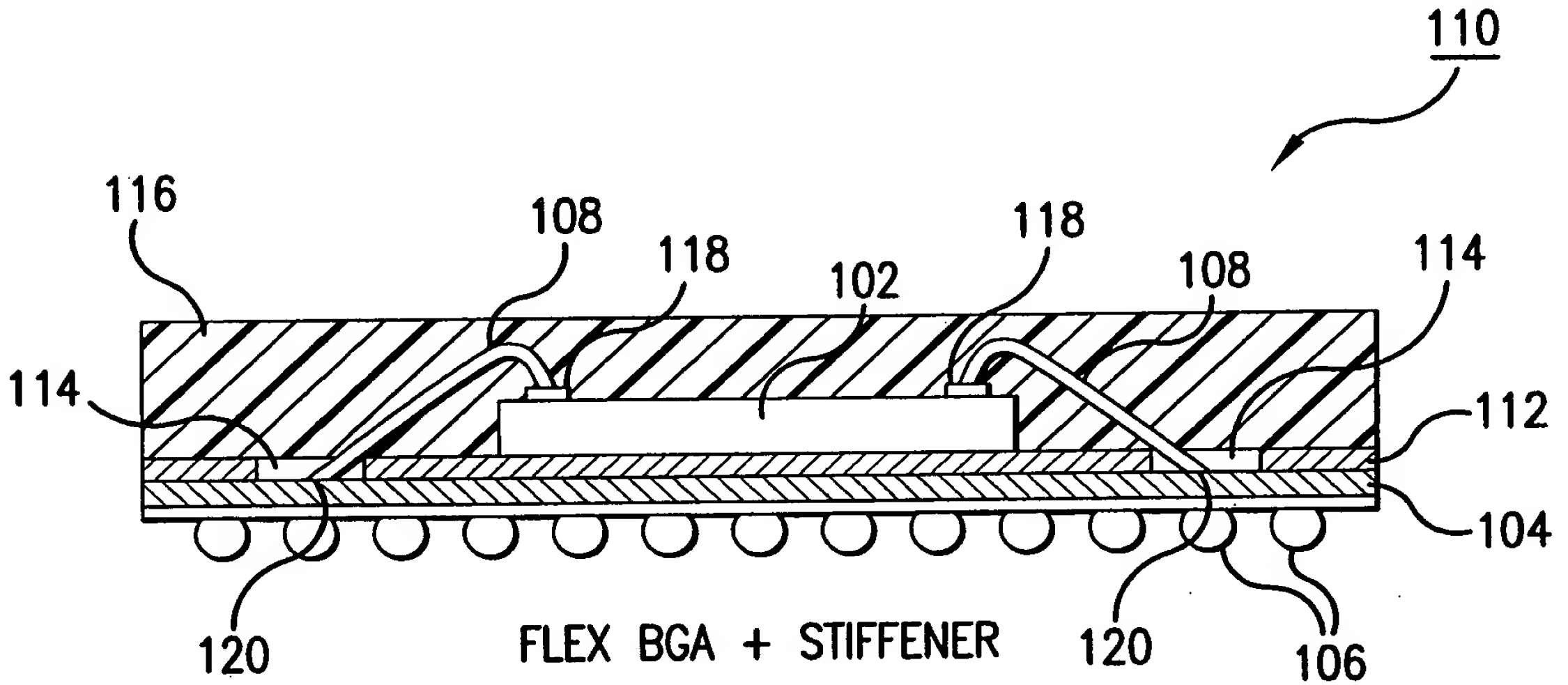


FIG.1B



Appl. No. 09/742,366; Filed: December 22, 2000
 Dkt. No. 1875.0200000; Group Art Unit: 2811
 Inventor(s): Khan et al.; Tel: 202/371-2600
 Title: Enhanced Die-Up Ball Grid Array and Method for Making the Same

2/21

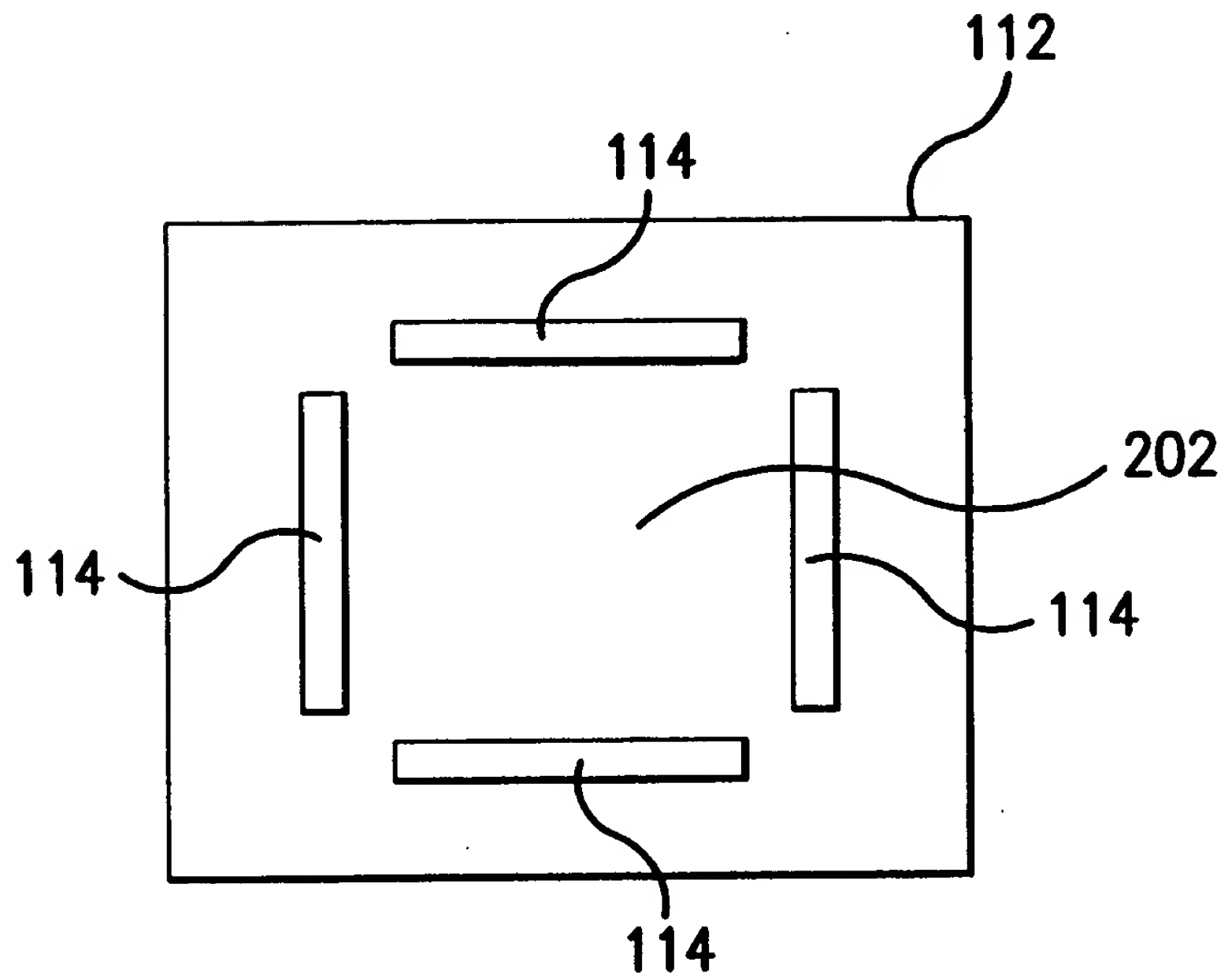


FIG. 2A

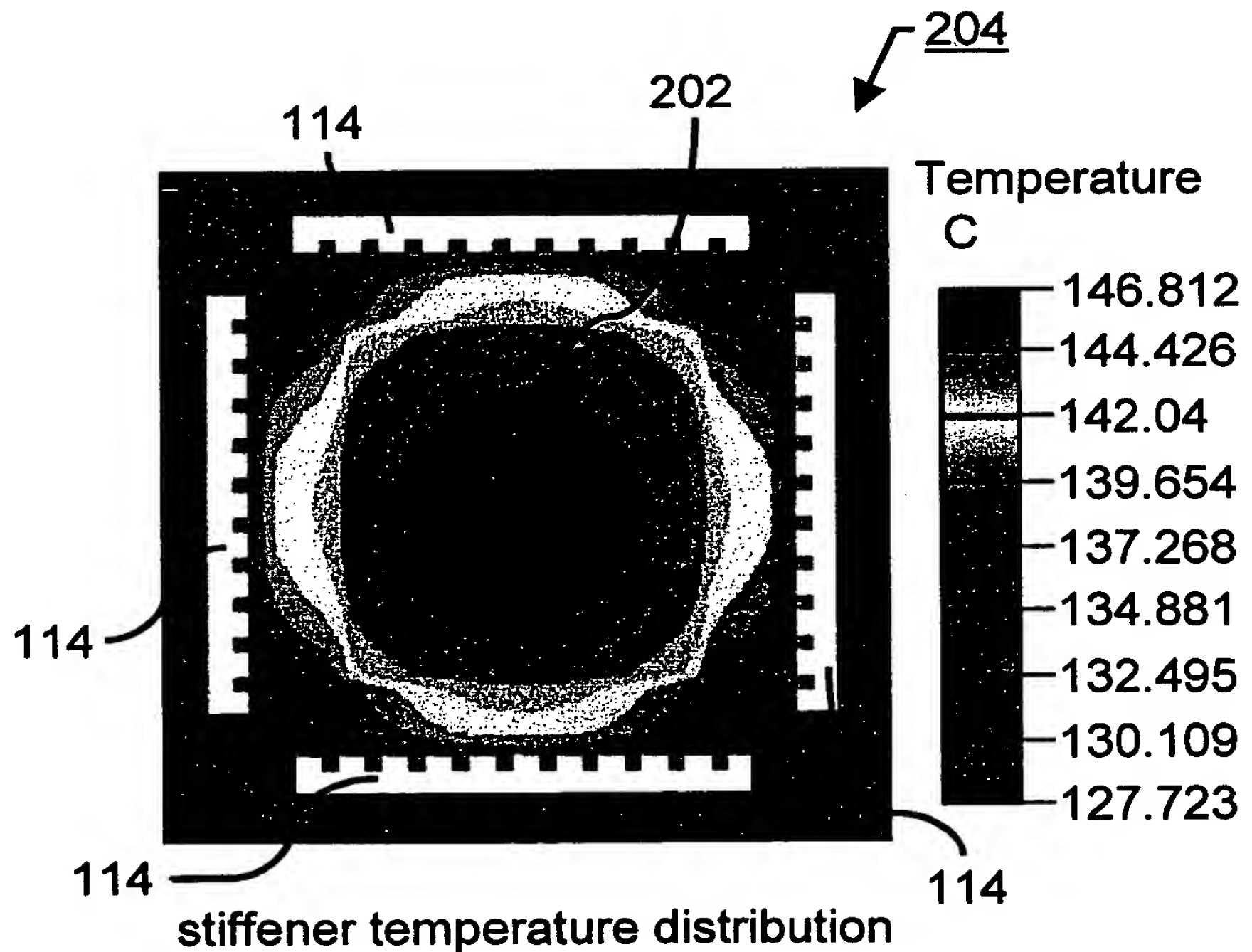


FIG. 2B



3/21

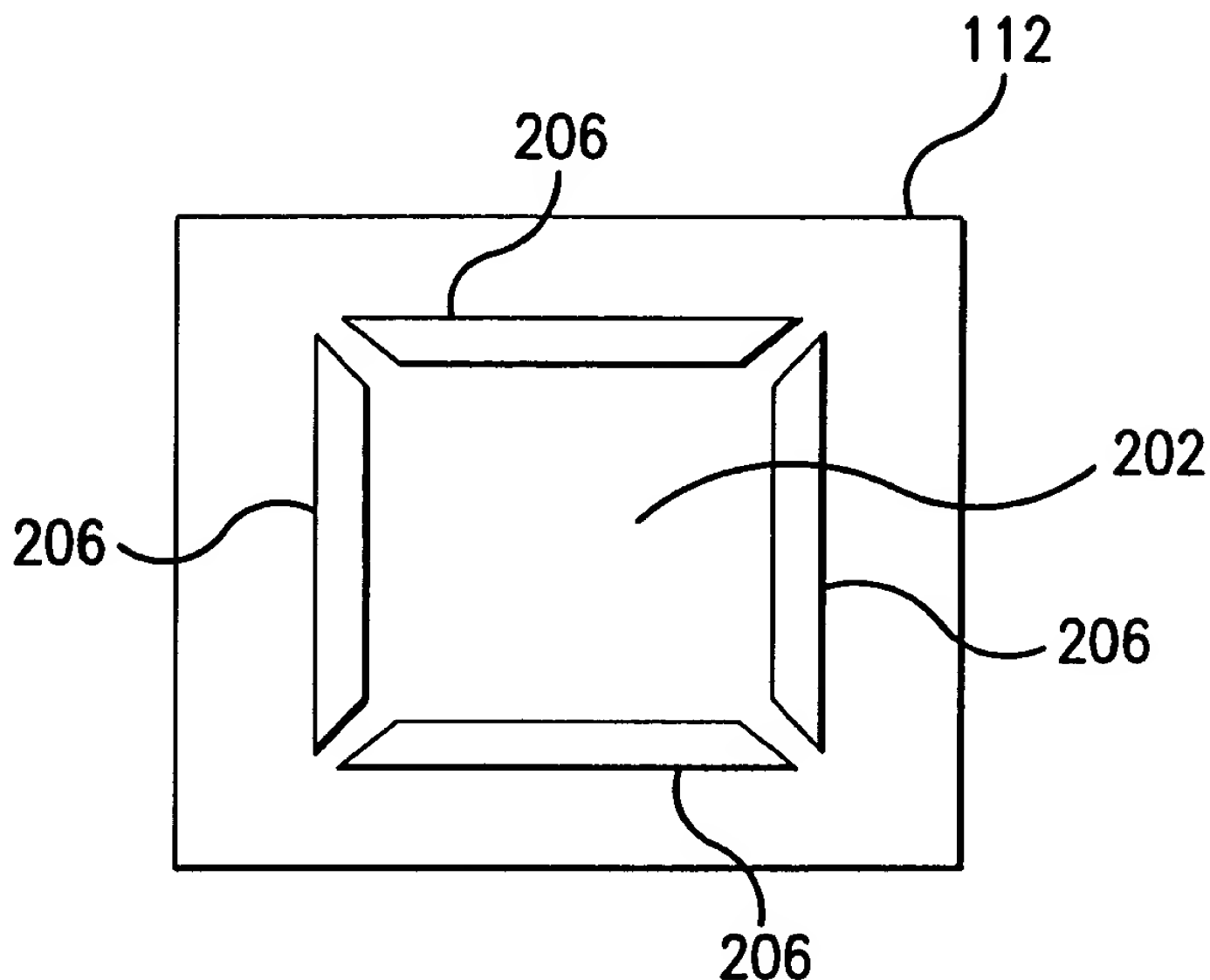


FIG. 2C

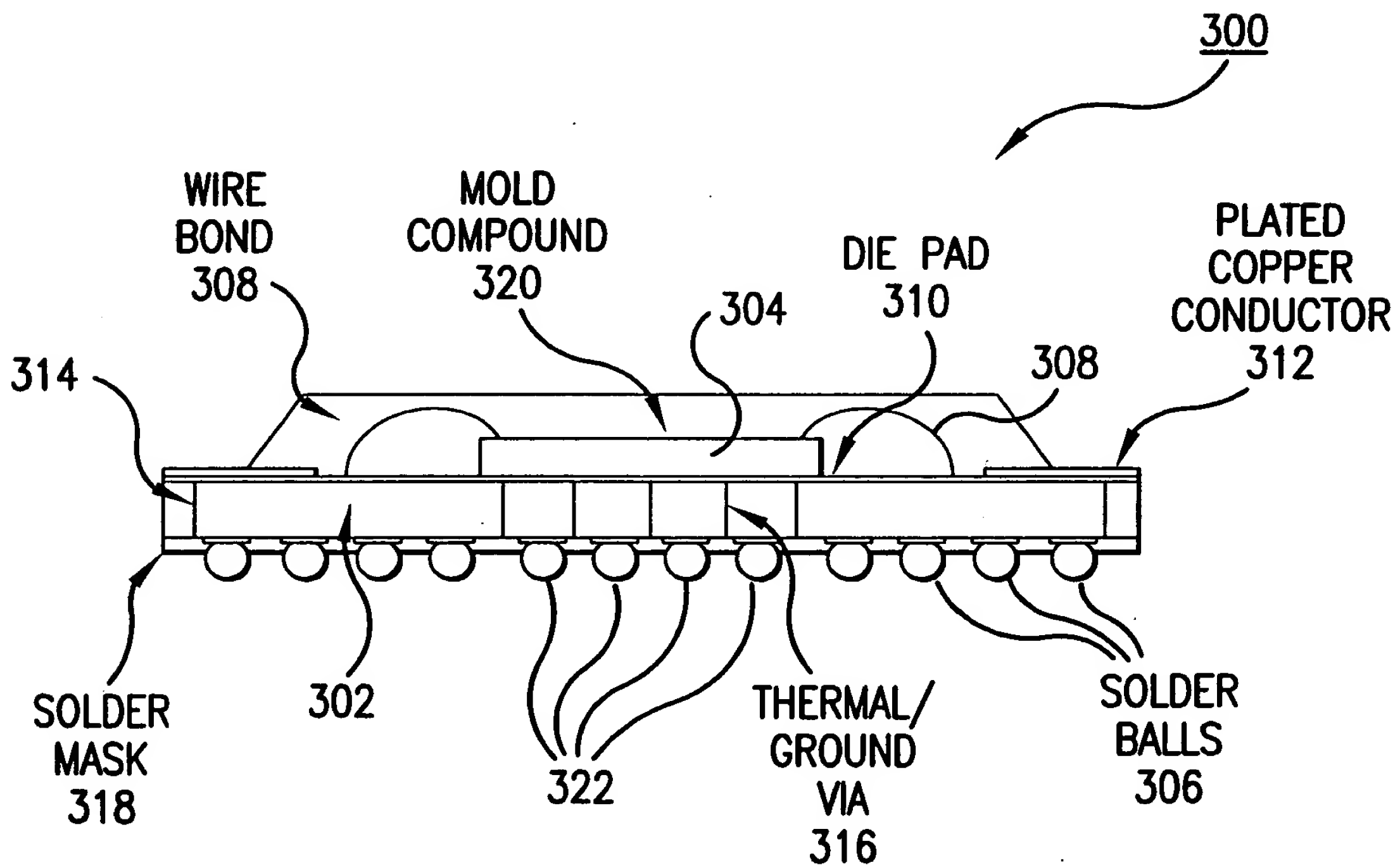


FIG. 3



4/21

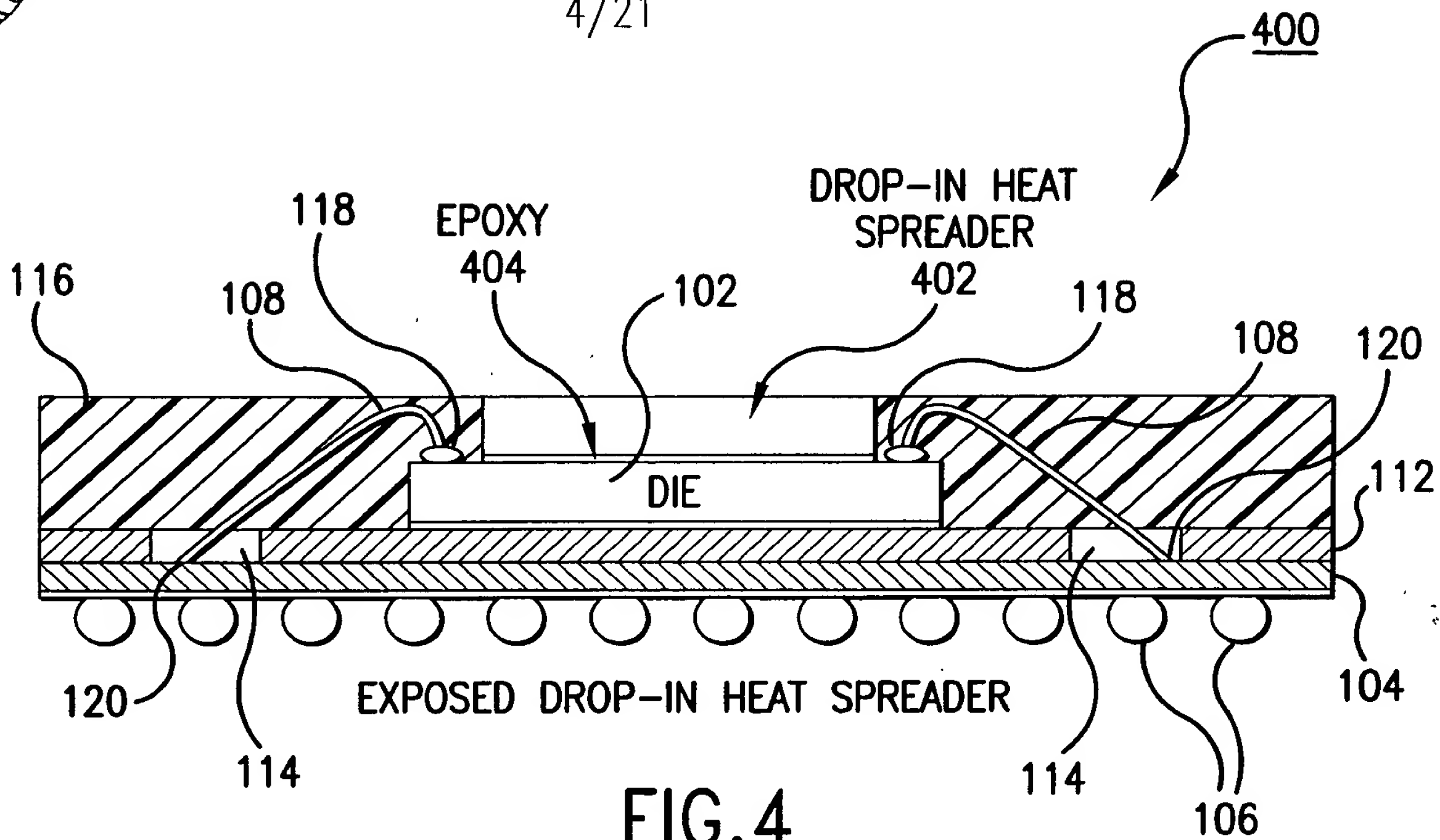


FIG. 4

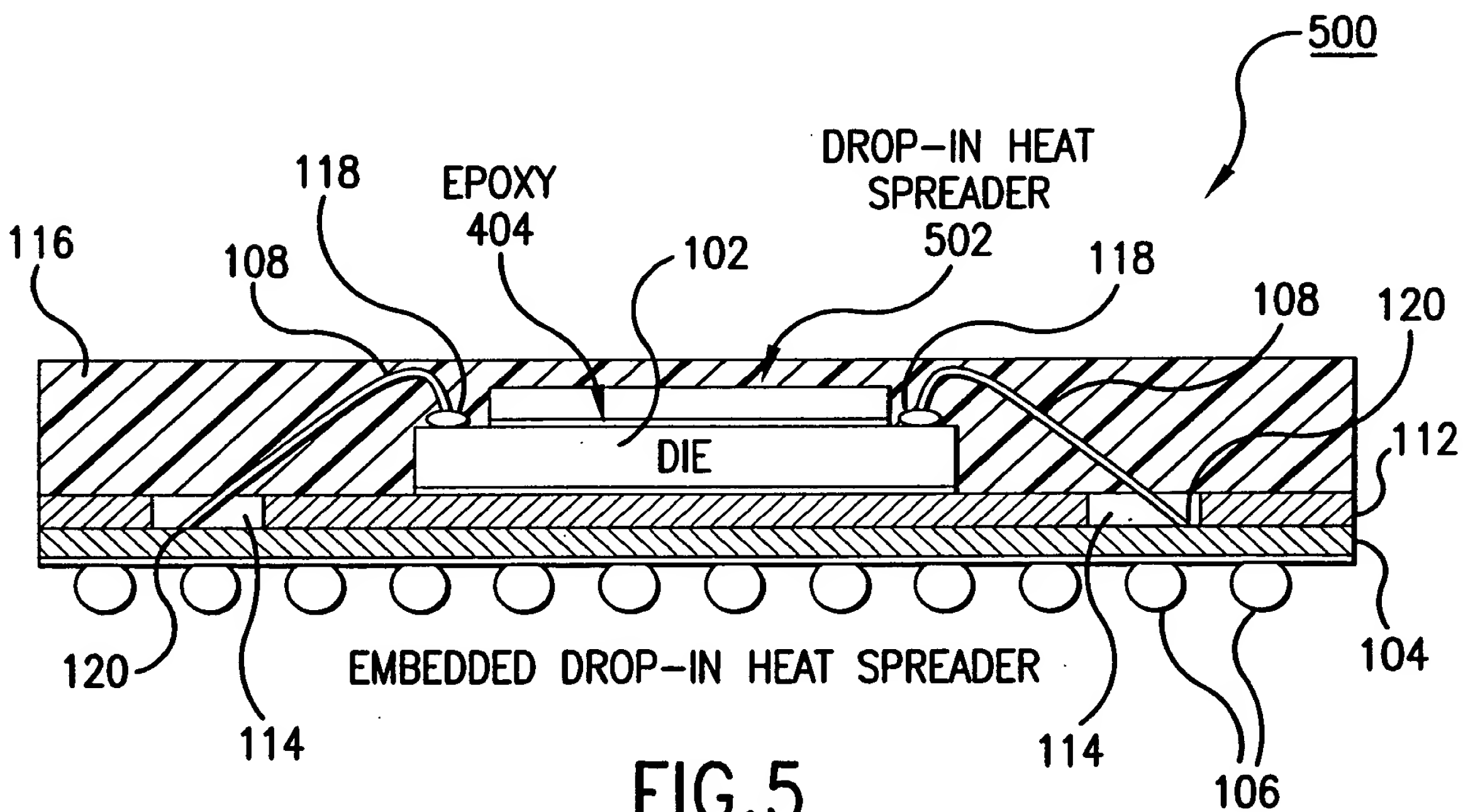


FIG. 5



5/21

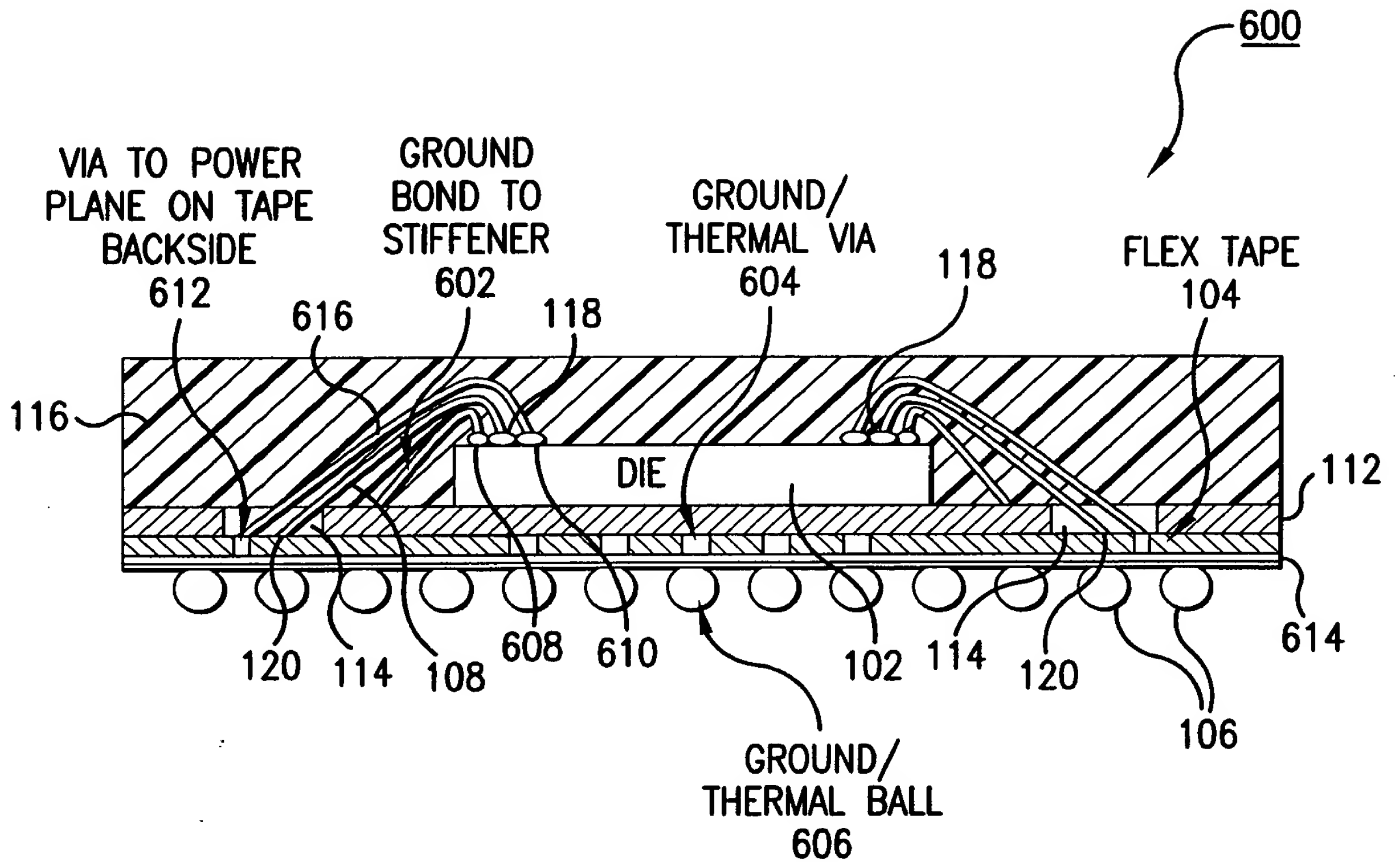


FIG. 6



6/21

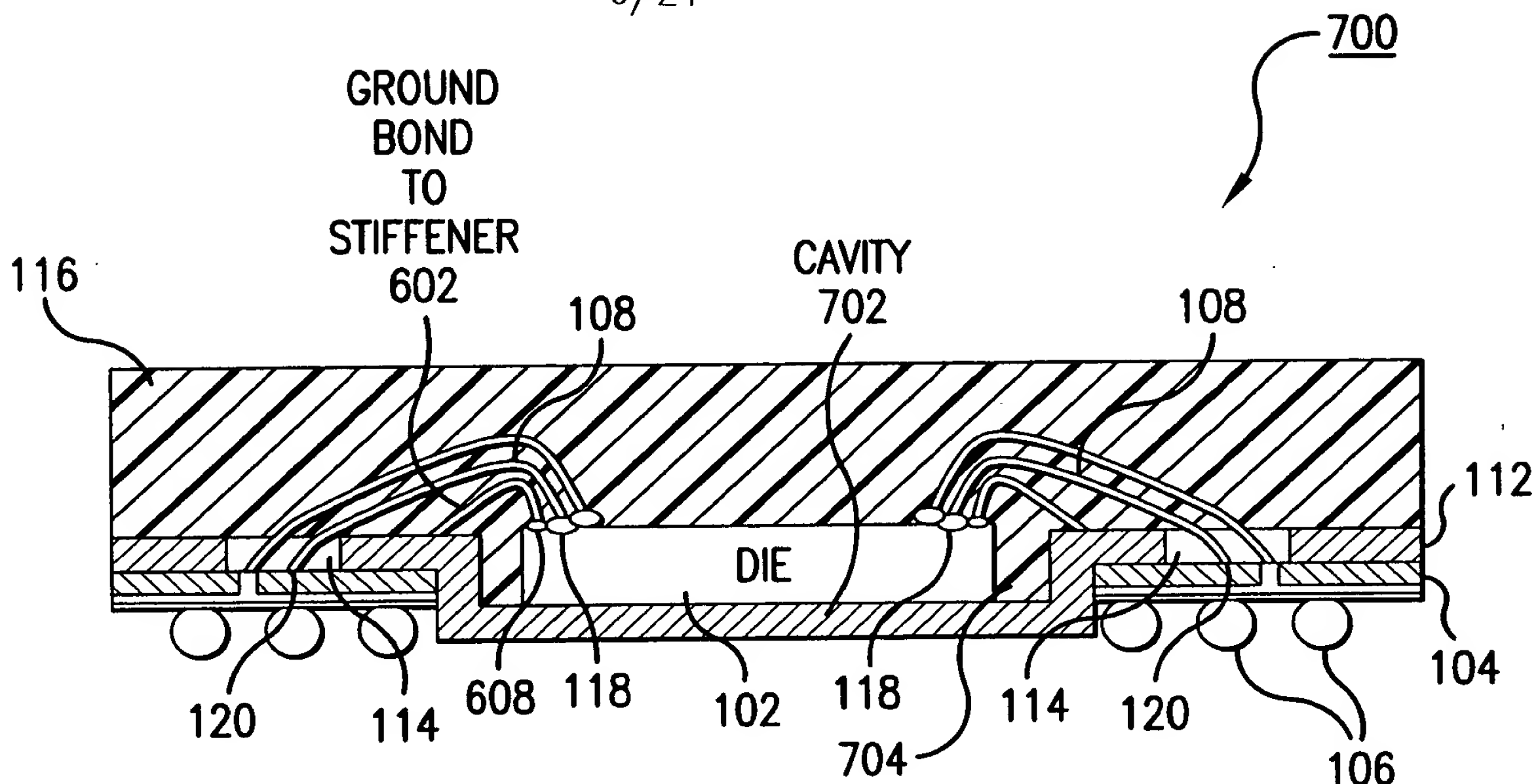


FIG.7

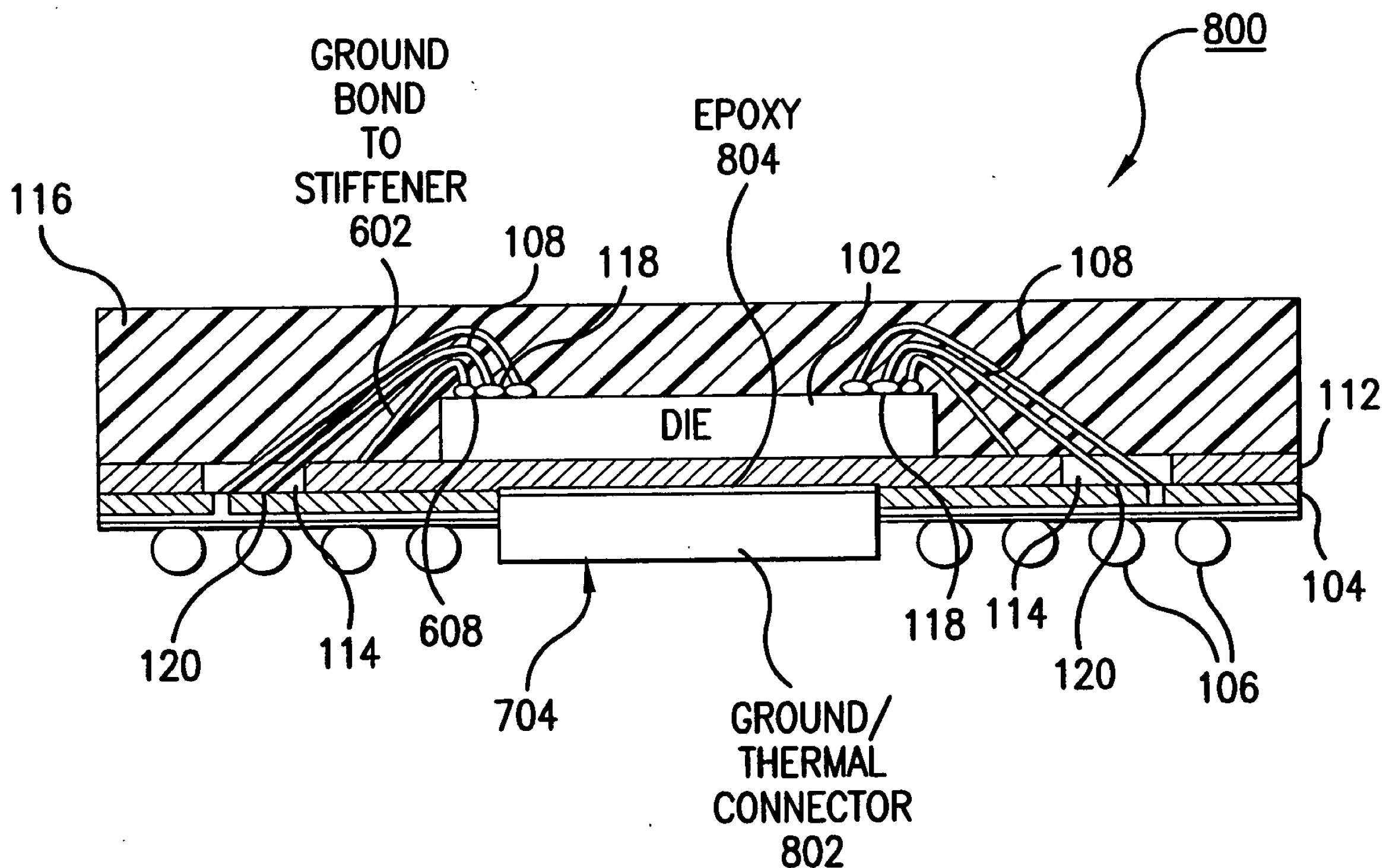


FIG.8



7/21

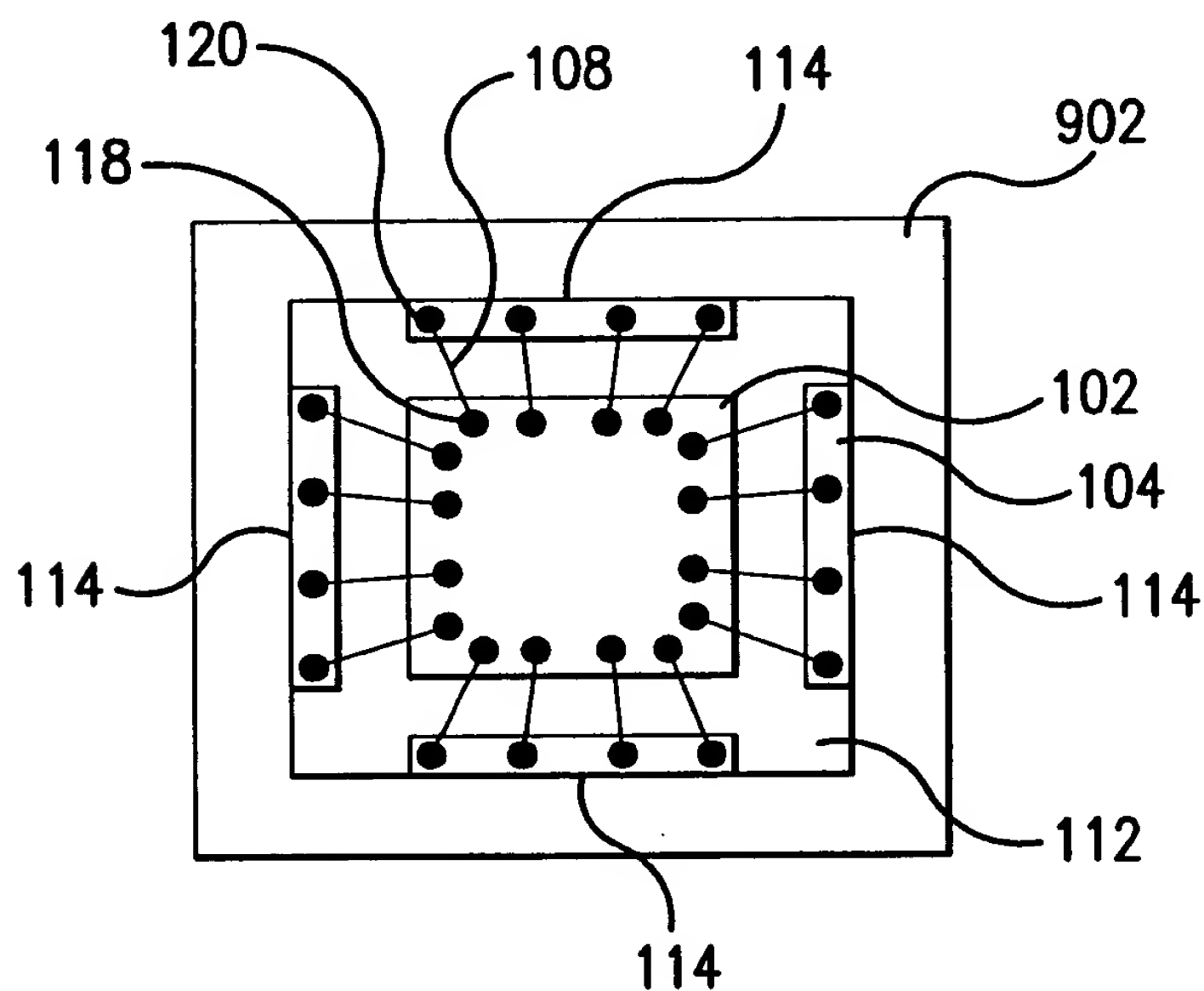
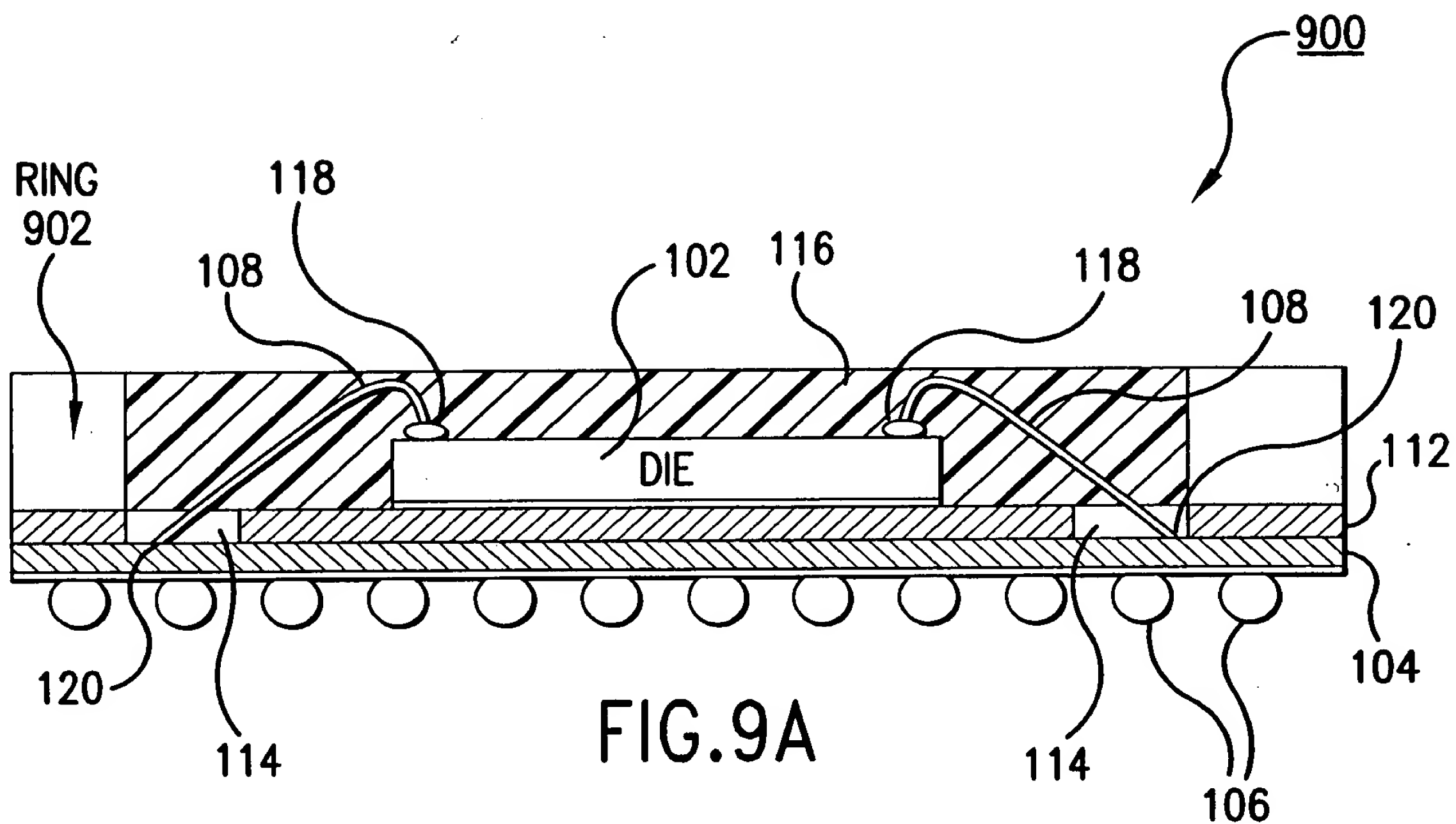


FIG. 9B



8/21

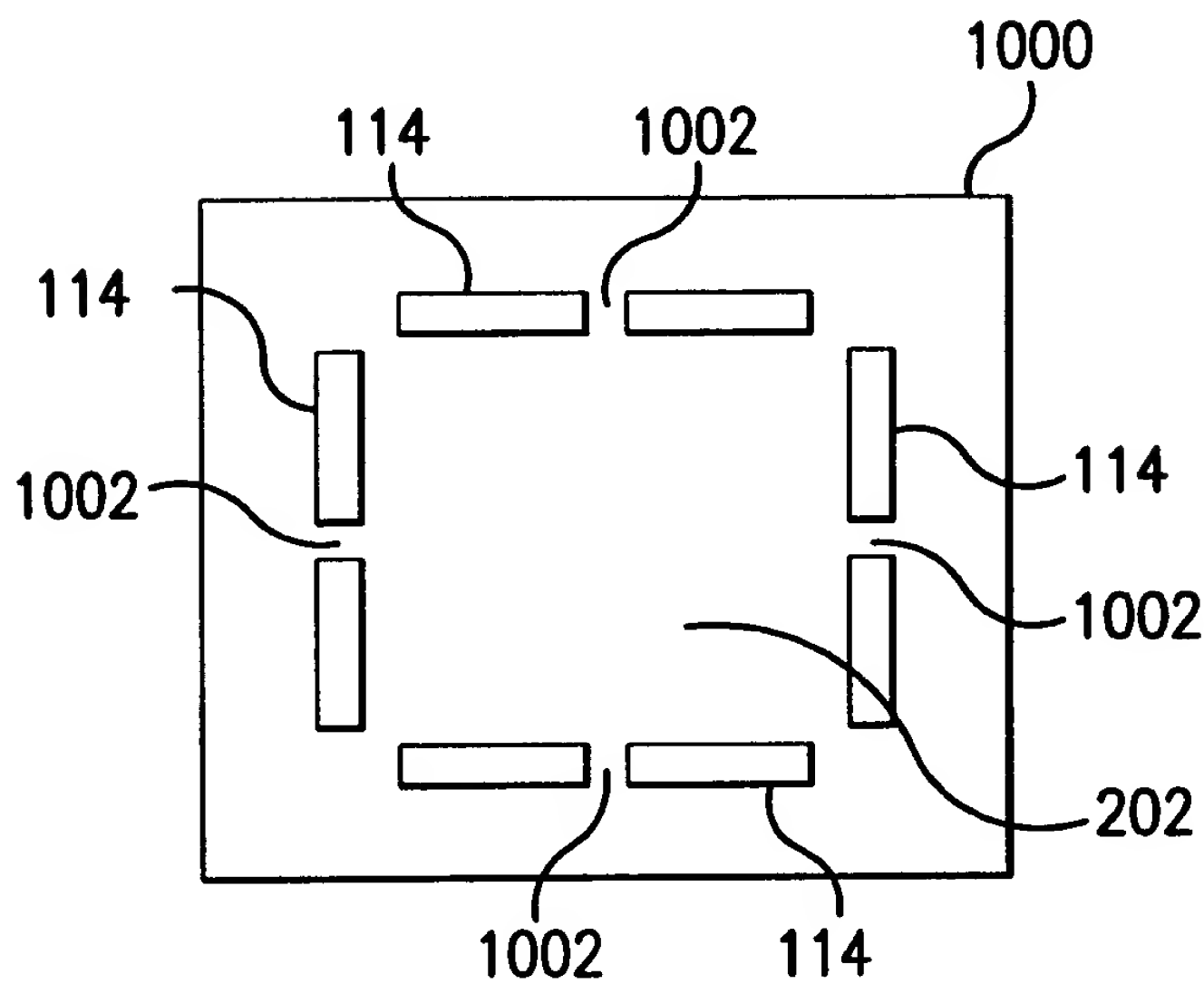


FIG. 10A

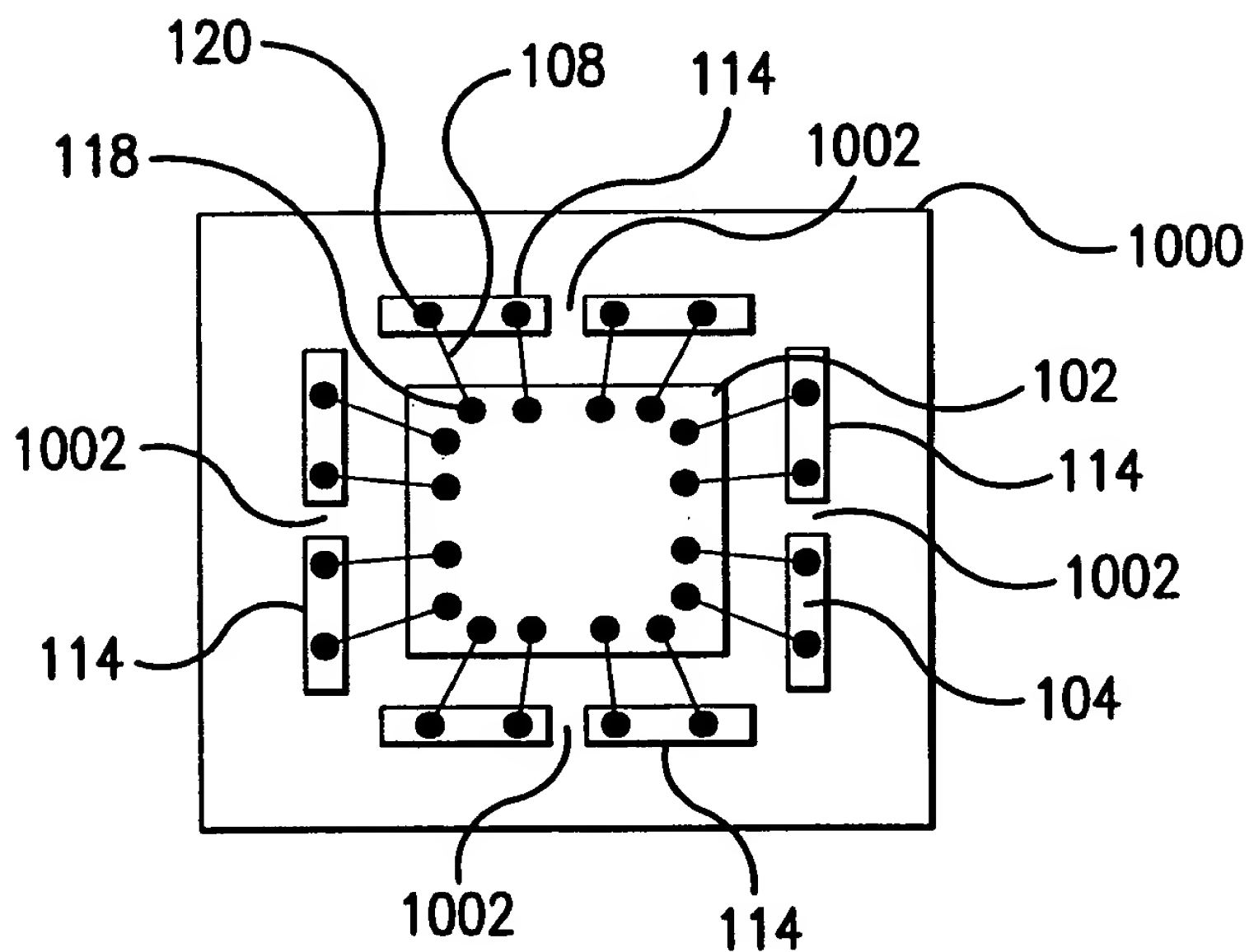


FIG. 10B



9/21

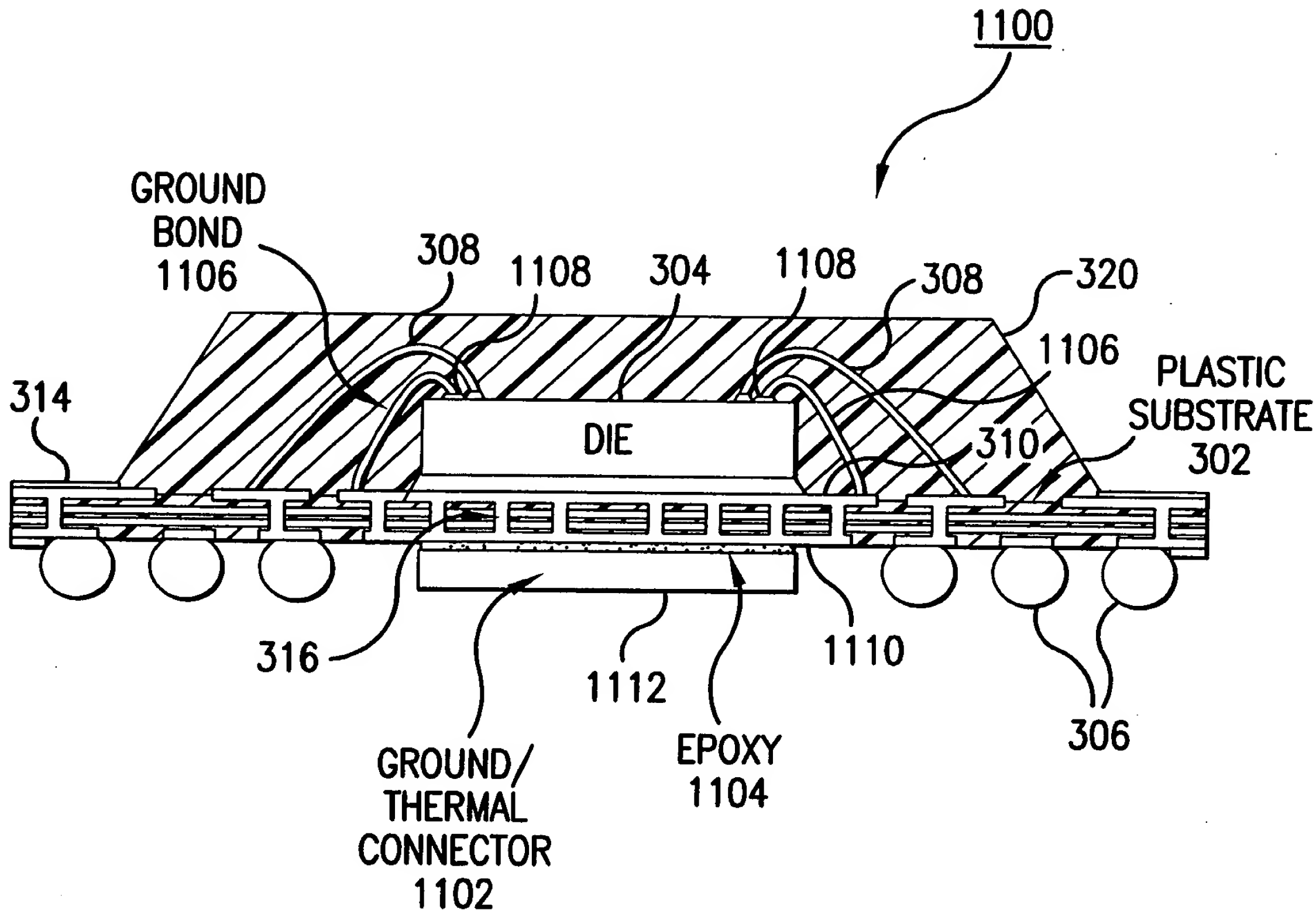


FIG.11



10/21

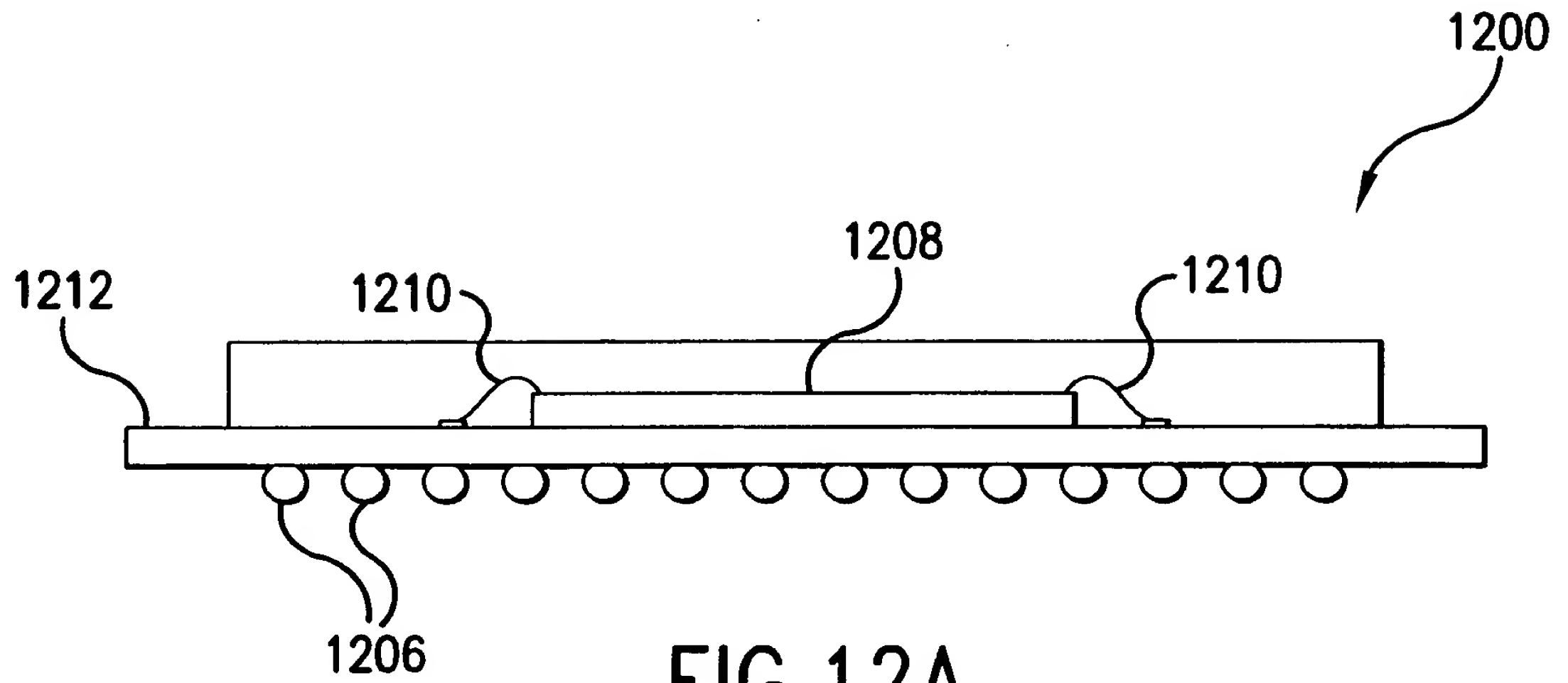


FIG.12A



11/21

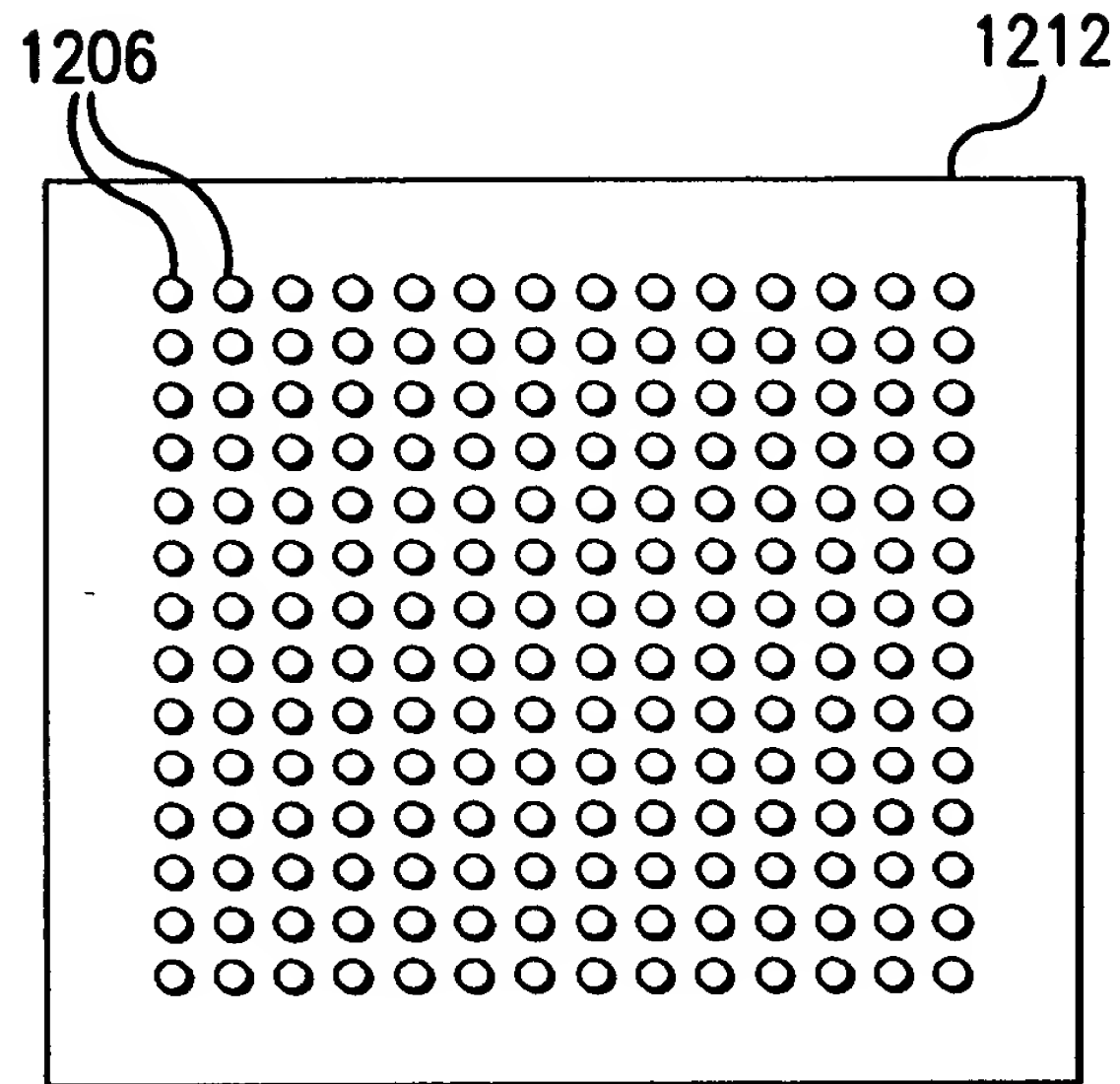


FIG. 12B

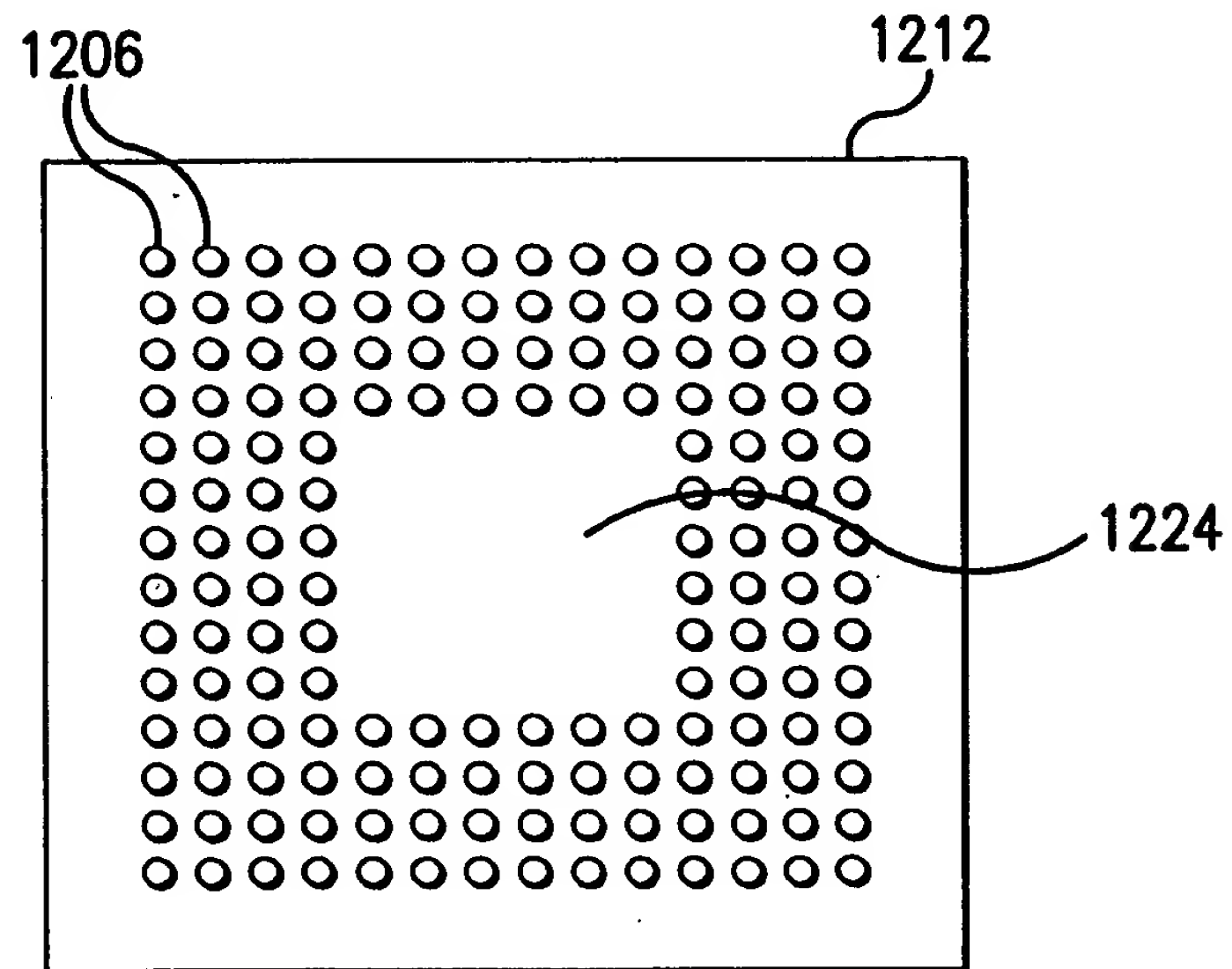


FIG. 12C



Appl. No. 09/742,366; Filed: December 22, 2000
Dkt. No. 1875.0200000; Group Art Unit: 2811
Inventor(s): Khan et al.; Tel: 202/371-2600
Title: Enhanced Die-Up Ball Grid Array and Method for
Making the Same

12/21

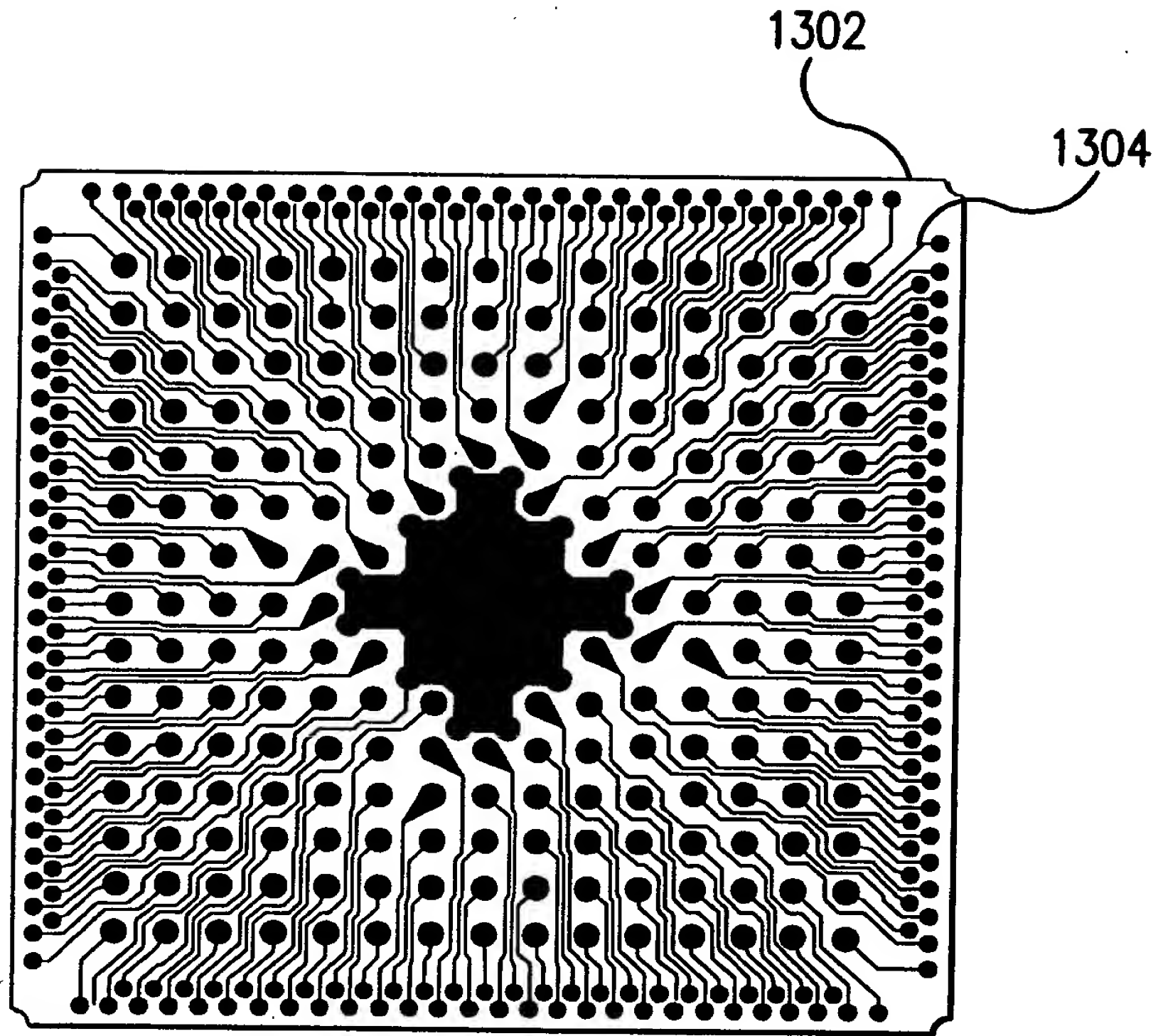


FIG. 13

1400

13/21

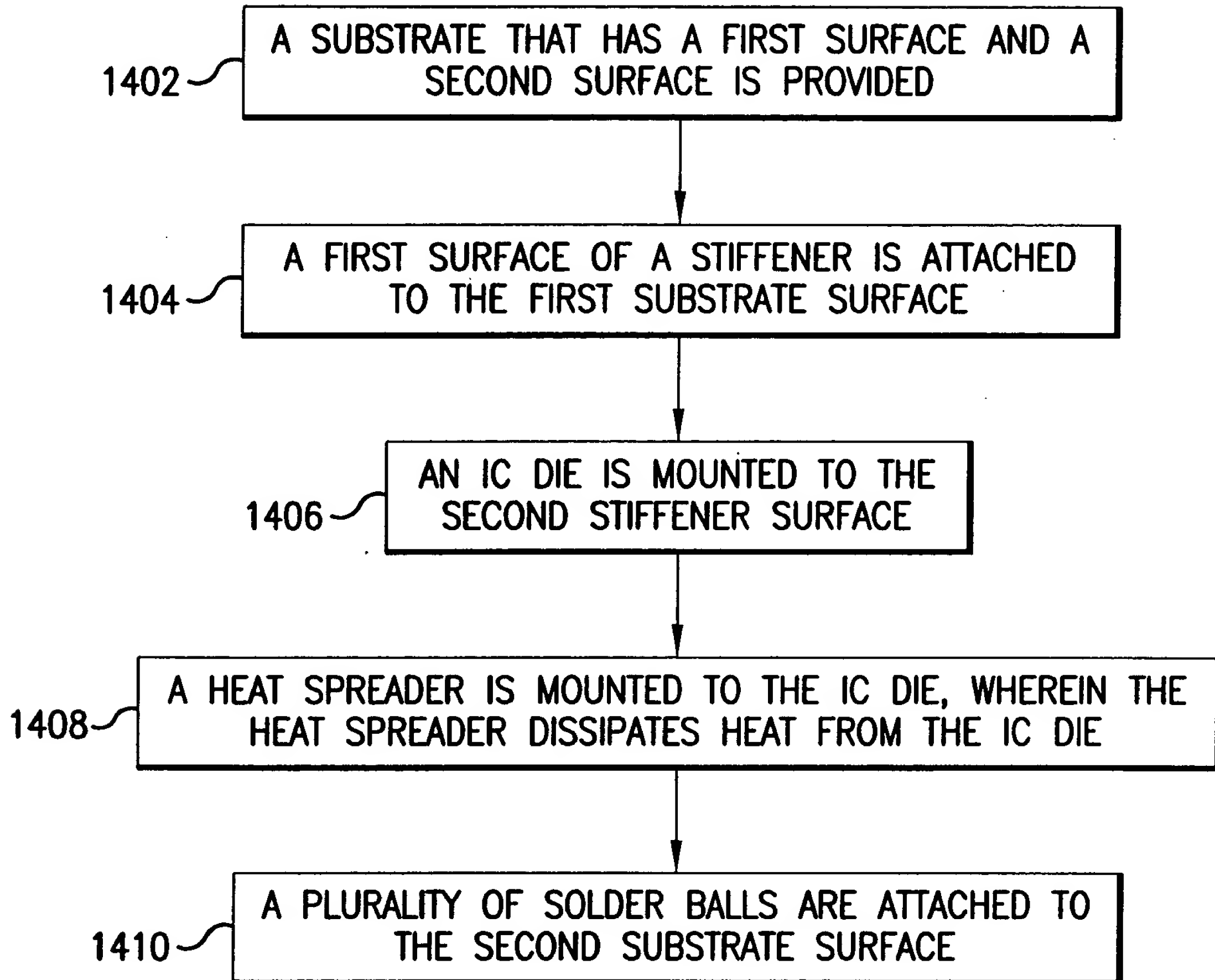
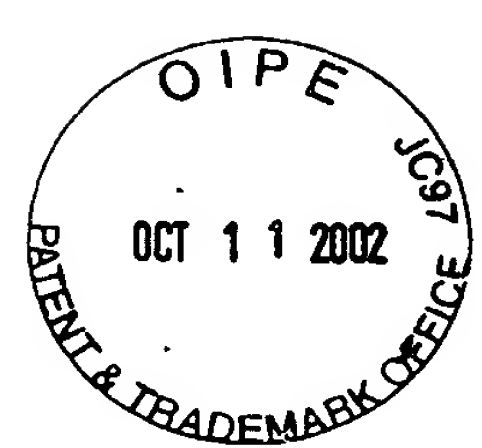


FIG.14



14/21

1500

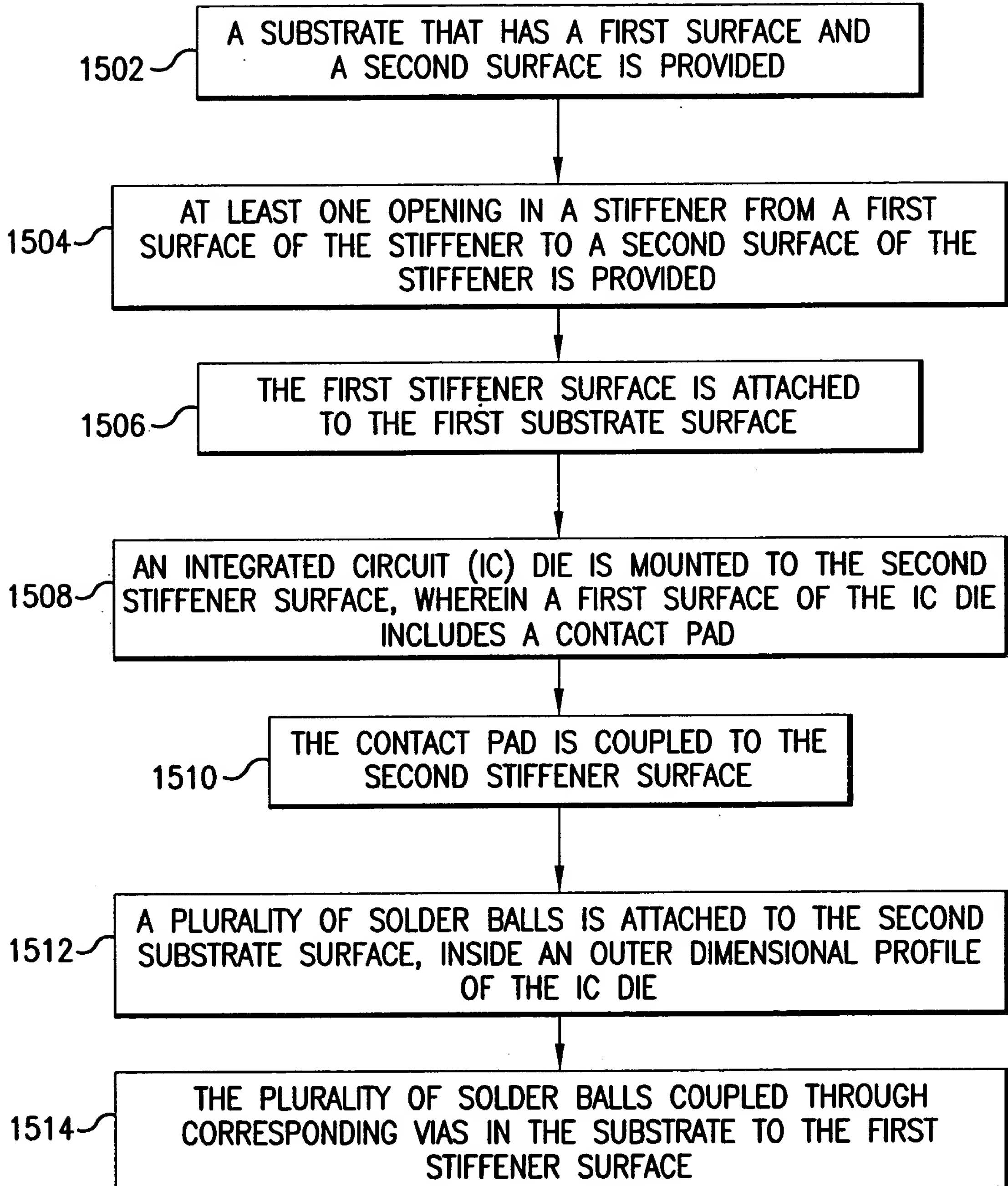


FIG.15

15/21

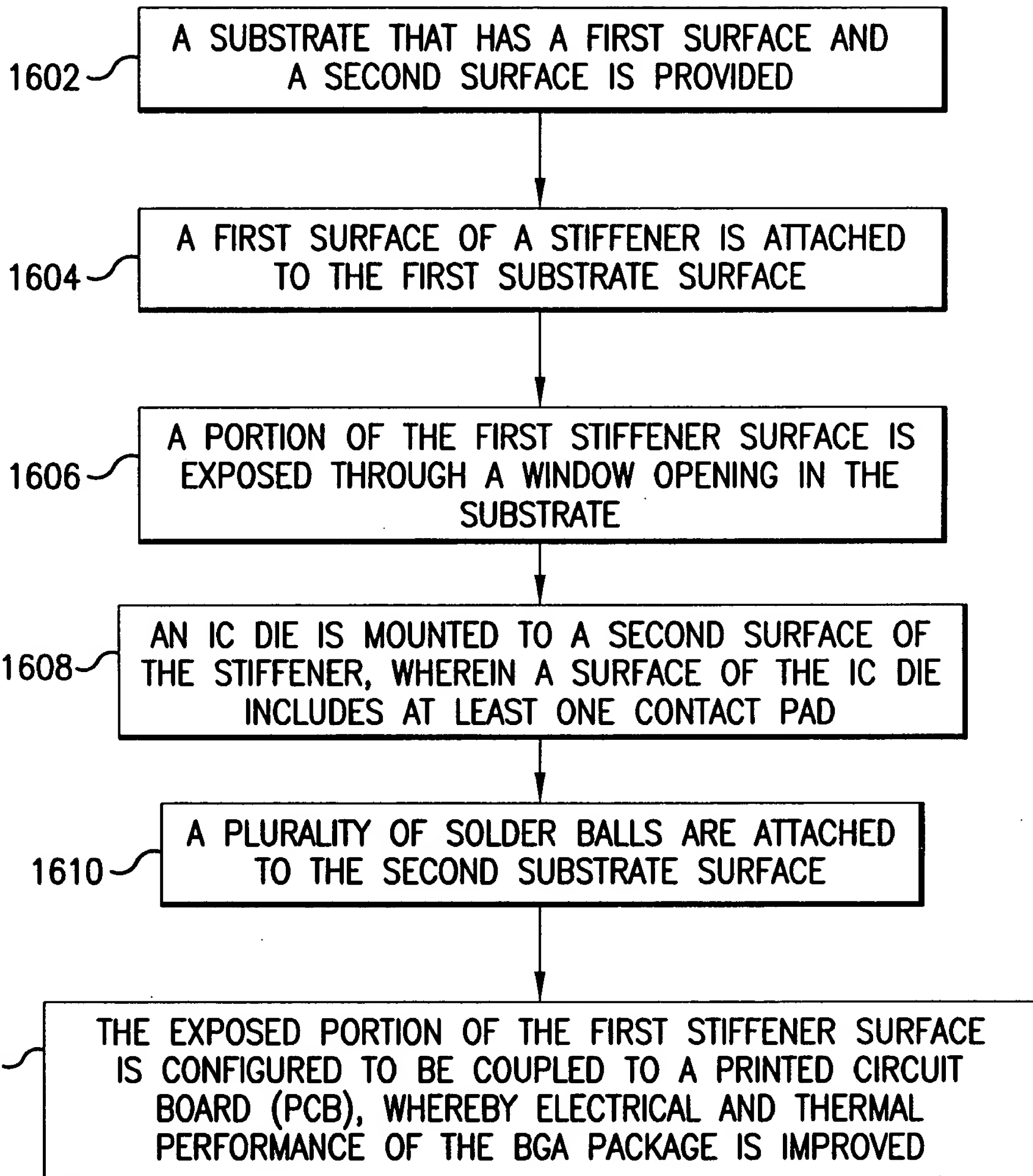
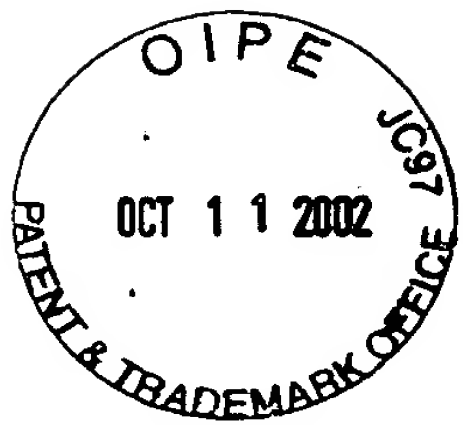
1600

FIG.16A



16/21

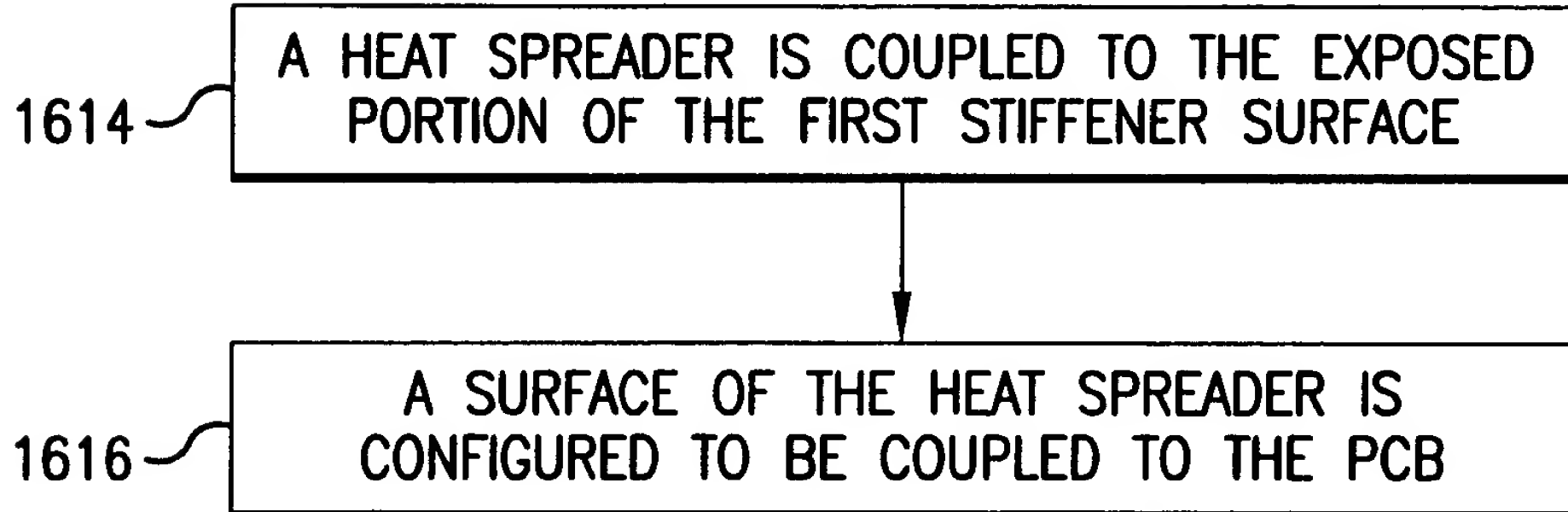


FIG.16B

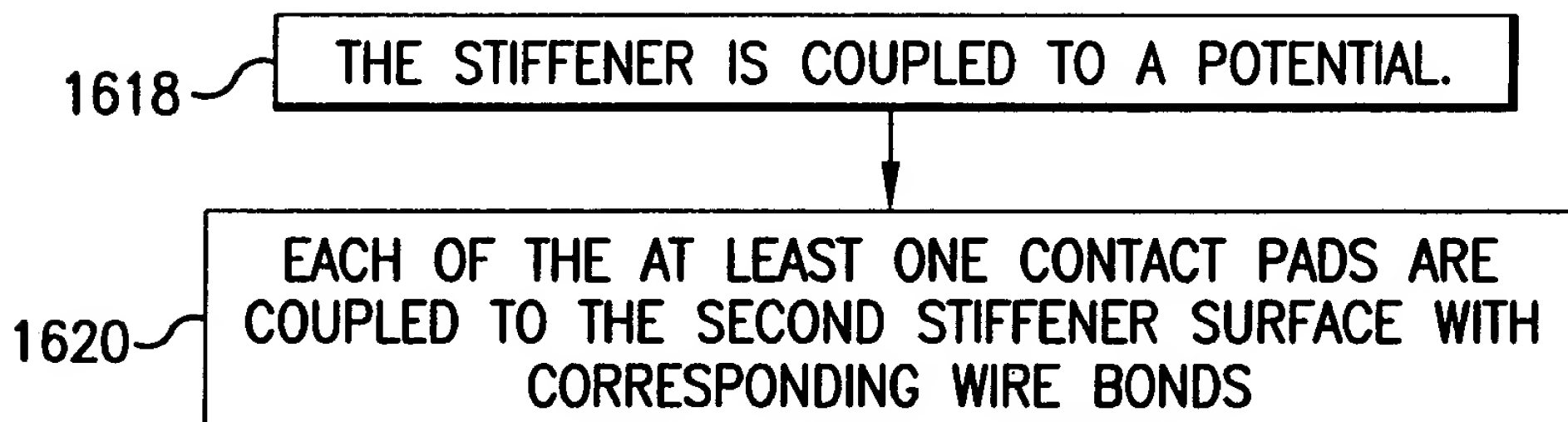


FIG.16C

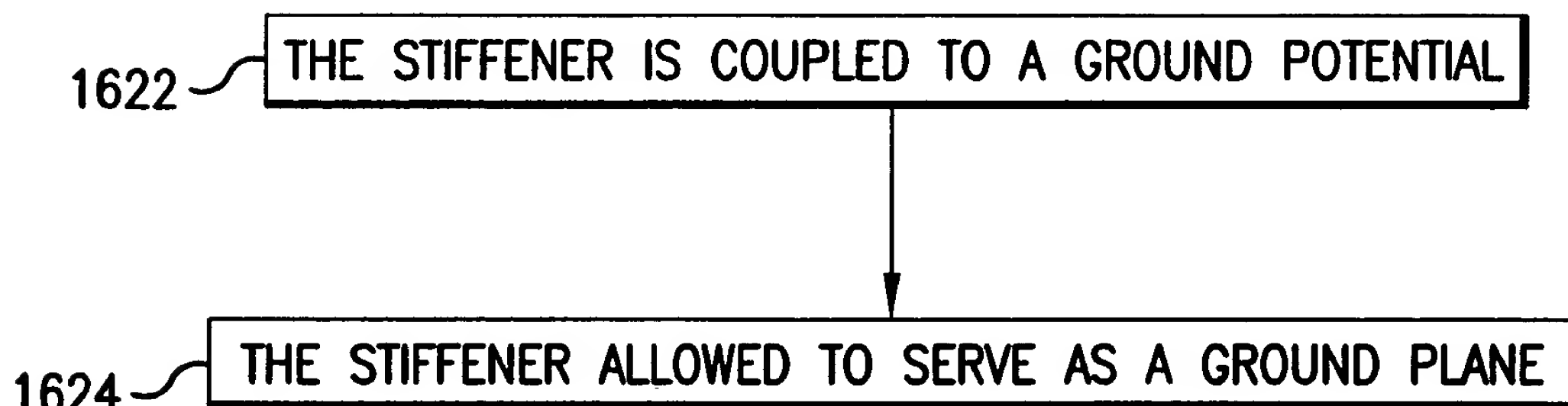


FIG.16D



17/21

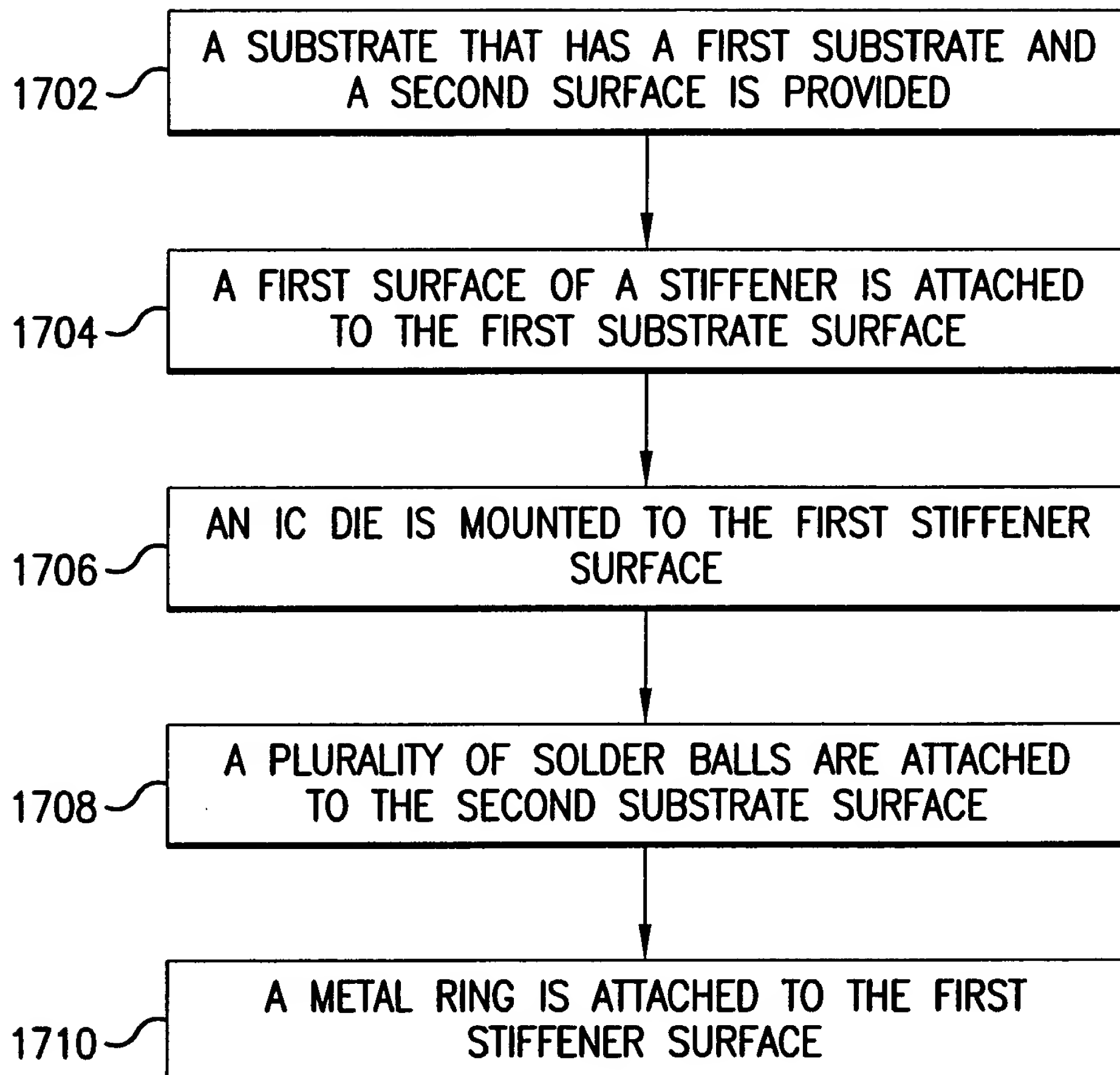
1700

FIG.17



18/21

1800

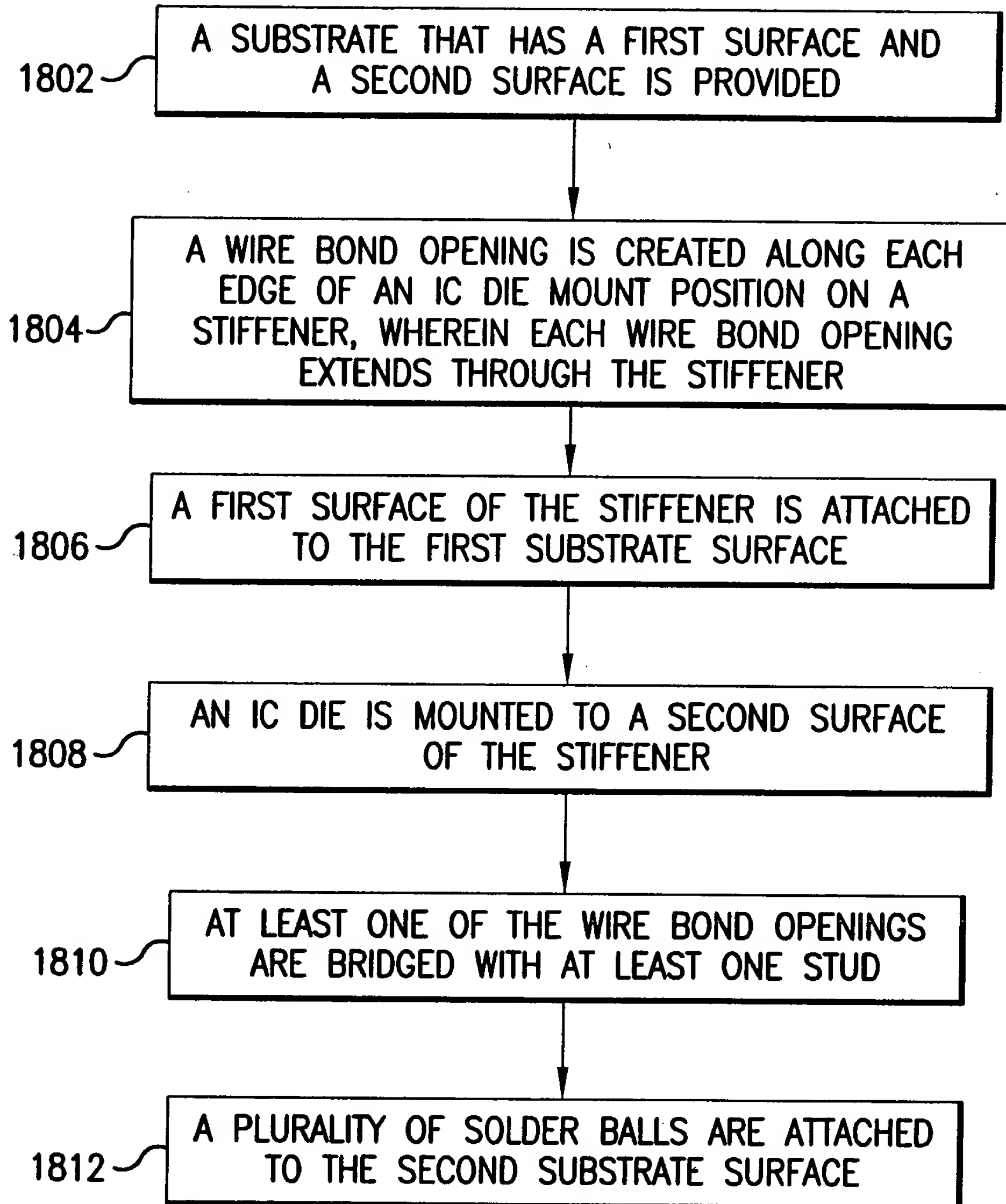


FIG.18



19/21

1900

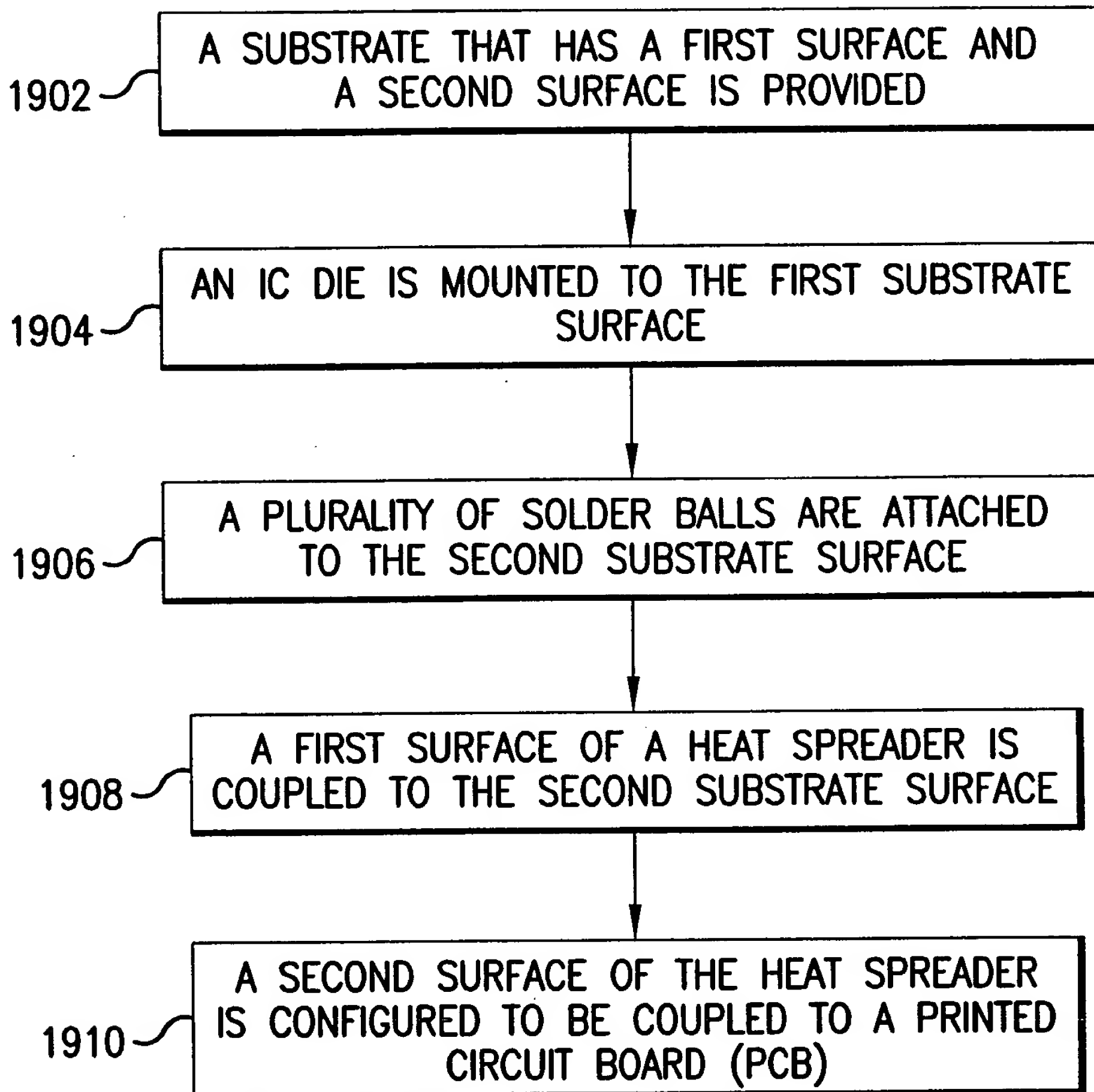
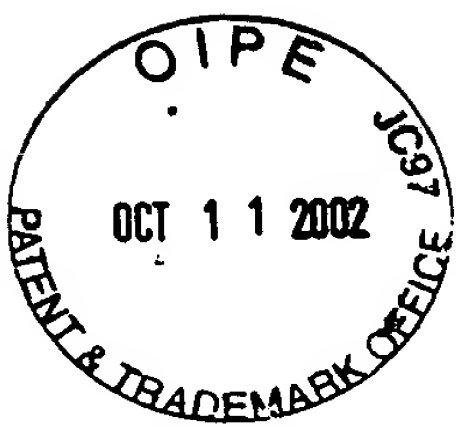


FIG.19A



20/21

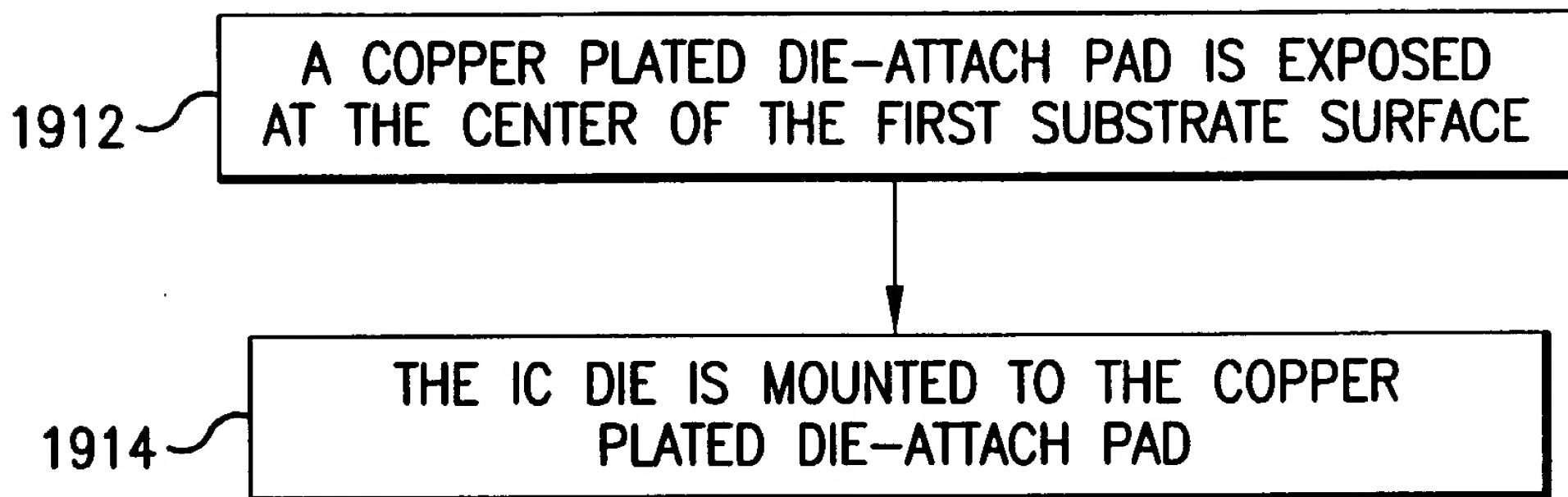


FIG.19B

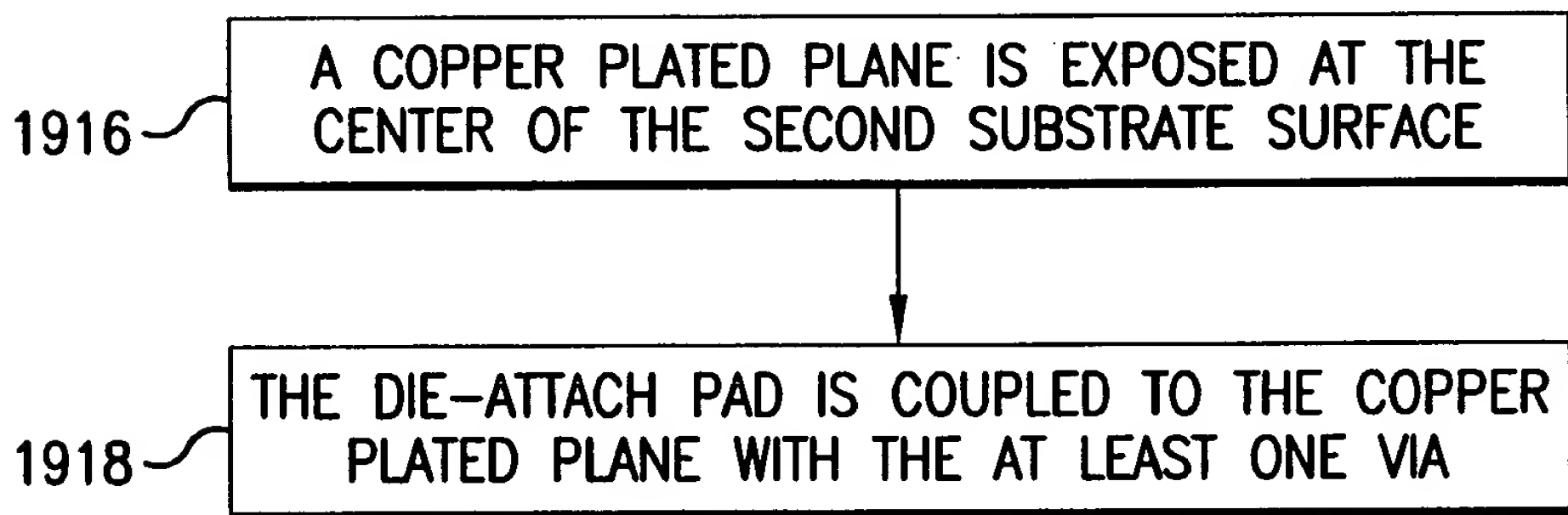


FIG.19C



Appl. No. 09/742,366; Filed: December 22, 2000
Dkt. No. 1875.0200000; Group Art Unit: 2811
Inventor(s): Khan et al.; Tel: 202/371-2600
Title: Enhanced Die-Up Ball Grid Array and Method for Making the Same

21/21

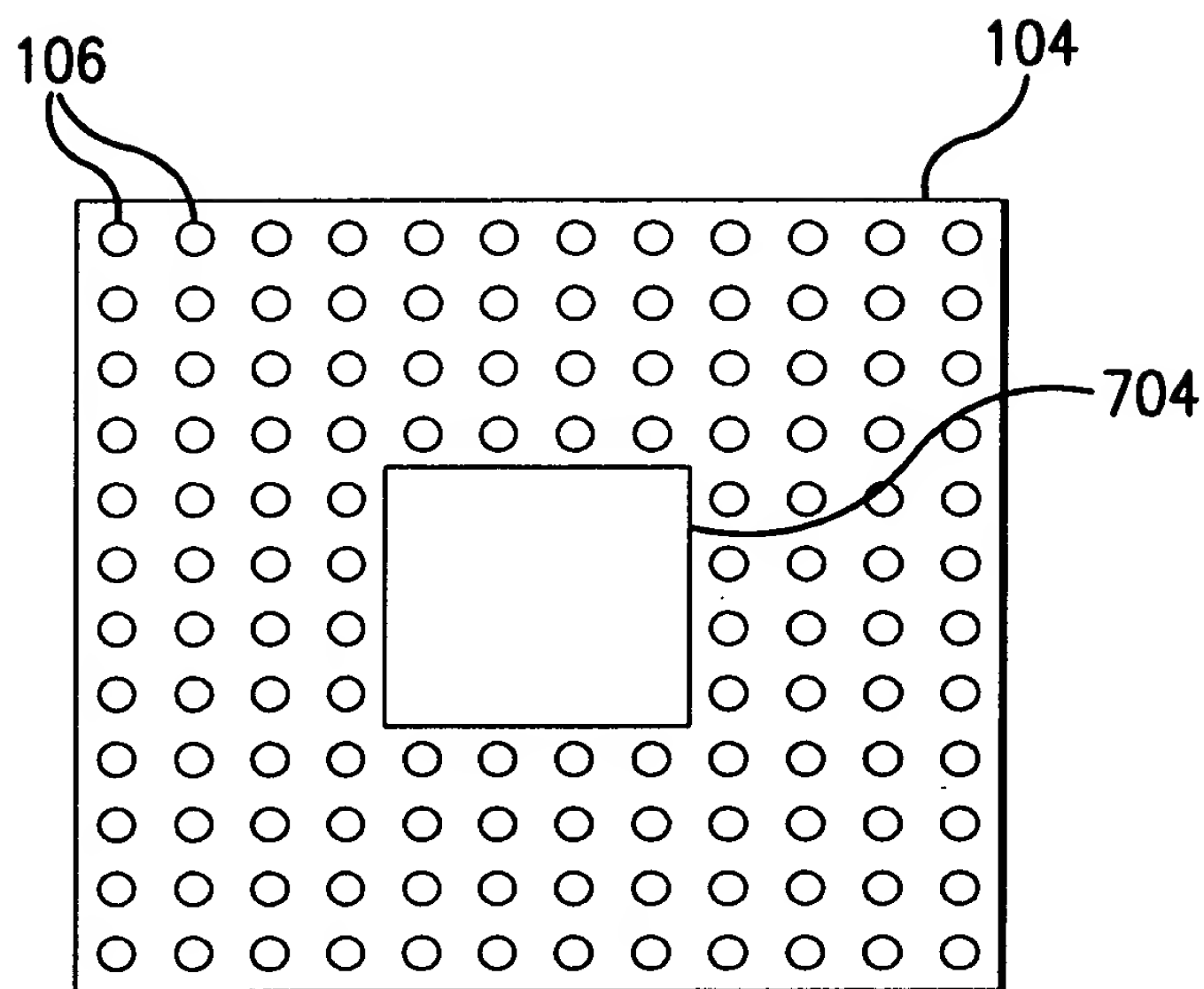


FIG. 20

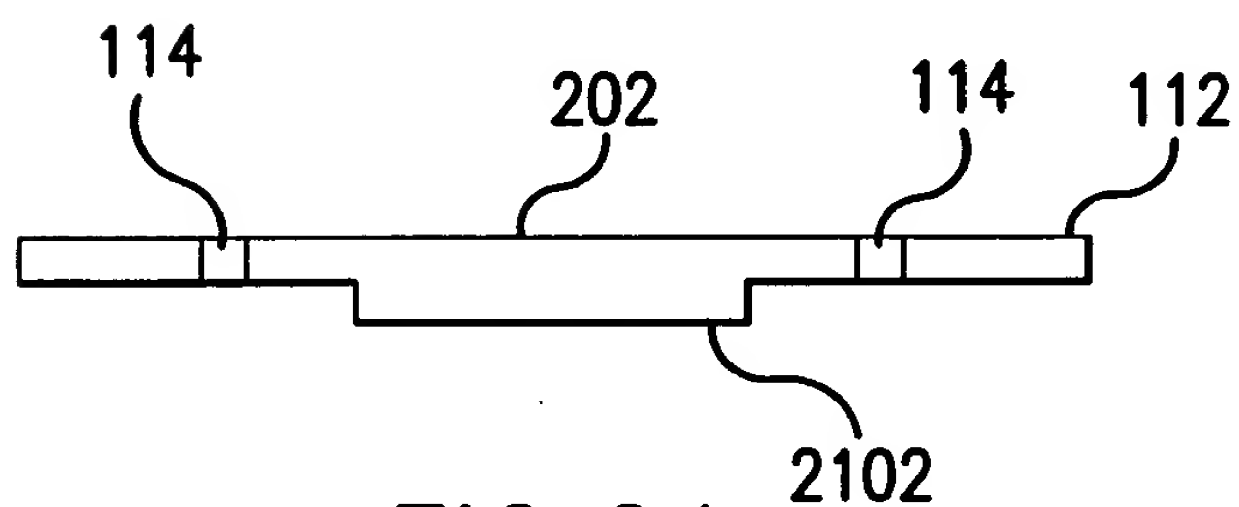


FIG. 21